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FILE 'REGISTRY' ENTERED AT 15:28:24 ON 26 OCT 2004  
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DICTIONARY FILE UPDATES: 25 OCT 2004 HIGHEST RN 769101-30-6

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=> FILE HCAPL

FILE 'HCAPLUS' ENTERED AT 15:28:28 ON 26 OCT 2004  
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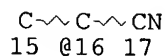
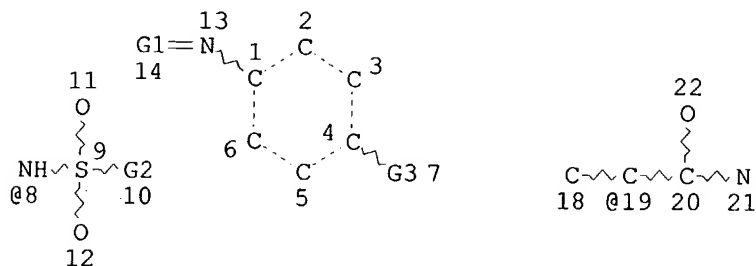
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FILE COVERS 1907 - 26 Oct 2004 VOL 141 ISS 18  
FILE LAST UPDATED: 25 Oct 2004 (20041025/ED)

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> D QUE

L78 STR



1335 structures from  
the query

VAR G1=16/19/CY  
VAR G2=AK/CY  
VAR G3=OH/8  
NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

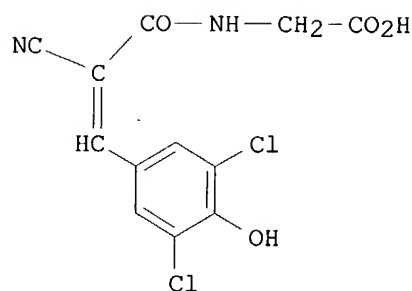
GRAPH ATTRIBUTES:  
RSPEC I  
NUMBER OF NODES IS 22

STEREO ATTRIBUTES: NONE  
L80 SCR 1599  
L82 1335 SEA FILE=REGISTRY SSS FUL L78 AND L80  
L83 2080 SEA FILE=HCAPLUS ABB=ON L82  
L84 44 SEA FILE=HCAPLUS ABB=ON L83(L) (HAIR OR KERAT?)

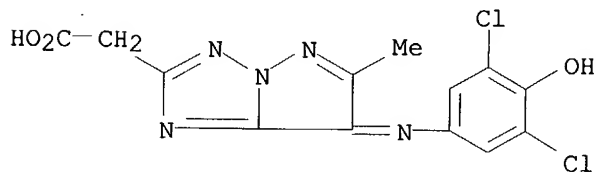
=> D L84 1-44 BIB ABS IND HITSTR

L84 ANSWER 1 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 2004:781935 HCAPLUS  
DN 141:282410  
TI Hair dye compositions containing direct dyes having dissociating groups  
IN Kawagishi, Toshio; Dominic, Pratt  
PA Kao Corp., Japan; Fuji Photo Film Co., Ltd.  
SO Jpn. Kokai Tokkyo Koho, 38 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004262888	A2	20040924	JP 2003-56768	20030304
PRAI	JP 2003-56768		20030304		
GI					



- AB The hair dye compns. contain direct dyes DYE-(L)n-DIS (DYE = residue of dye having dissociating H atom in chromophore and maximum absorption at 400-700 nm in dissociated state; L = divalent linking group; n = 0, 1, 2; DIS = dissociating group). Goat hair was dyed well with a hair dye foam composition (pH 8.5) containing a direct dye I 0.5, monoethanolamine 1, EtOH 15, propylene glycol 10, polyoxyethylene octyldodecyl ether 10, polyoxyethylene tridecyl ether 9, oleic acid diethanolamide 8, oleyl alc. 2, NH<sub>4</sub>Cl, LPG 10, and H<sub>2</sub>O to 100 weight% showed good color fastness to shampooing.
- IC ICM A61K007-13
- CC 62-3 (Essential Oils and Cosmetics)
- ST hair direct dye color fastness
- IT Dyes  
(direct; hair dye compns. containing direct dyes having dissociating groups)
- IT Hair preparations  
(dyes; hair dye compns. containing direct dyes having dissociating groups)
- IT 760191-15-9 760191-16-0 760191-17-1 760191-18-2 760191-19-3  
760191-20-6 760191-21-7 760191-22-8 760191-23-9  
760191-24-0 760191-25-1 760191-26-2
- RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(hair dye compns. containing direct dyes having dissociating groups)
- IT 760191-20-6
- RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(hair dye compns. containing direct dyes having dissociating groups)
- RN 760191-20-6 HCAPLUS
- CN 7H-Pyrazolo[1,5-b][1,2,4]triazole-2-acetic acid, 7-[(3,5-dichloro-4-hydroxyphenyl)imino]-6-methyl- (9CI) (CA INDEX NAME)



- L84 ANSWER 2 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN
- AN 2004:529213 HCAPLUS
- DN 141:93968
- TI Hair dyeing compositions containing a monoheteroyldiarylmethane direct dye or its leuco precursor
- IN Guerin, Frederic; Lagrange, Alain
- PA L'oreal, Fr.

SO Fr. Demande, 74 pp.  
 CODEN: FRXXBL  
 DT Patent  
 LA French  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2849373	A1	20040702	FR 2002-16851	20021230
	EP 1435227	A1	20040707	EP 2003-104982	20031226
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2004210781	A2	20040729	JP 2003-434419	20031226
PRAI	FR 2002-16851	A	20021230		
OS	MARPAT 141:93968				
AB	Hair dyeing compns. comprise a direct monoheteroyldiarylmethane dye and its leuco precursors. Thus, a formulation contained N-[4-[[4-(diethylamino)phenyl](4-oxo-4H-1-benzopyran-3-yl)methylene]-2,5-cyclohexadien-1-ylidene]-N-ethylethanaminium perchlorate 0.553, oleic diethanolamide 3, lauric acid 1, ethylene glycol monoethyl ether 5, hydroxyethyl cellulose 2, 2-amino-2-methyl-1-propanol 9.5, and water qs to 100 g. chloride 0.56, benzyl alc. 4.0, PEG 6.0, hydroxyethyl cellulose 0.7, alkyl polyglucoside 4.5, phosphate buffer 7, and water qs to 100 g.				
IC	ICM A61K007-13				
CC	62-3 (Essential Oils and Cosmetics)				
ST	monoheteroyldiarylmethane direct dye hair				
IT	Azo dyes (acid; hair dyeing compns. containing monoheteroyldiarylmethane direct dye or its leuco precursor)				
IT	Phenols, biological studies RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (amino; hair dyeing compns. containing monoheteroyldiarylmethane direct dye or its leuco precursor)				
IT	Azo dyes Dyes (cationic; hair dyeing compns. containing monoheteroyldiarylmethane direct dye or its leuco precursor)				
IT	Amines, biological studies RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (diamines, aromatic; hair dyeing compns. containing monoheteroyldiarylmethane direct dye or its leuco precursor)				
IT	Dyes (direct; hair dyeing compns. containing monoheteroyldiarylmethane direct dye or its leuco precursor)				
IT	Hair preparations (dyes; hair dyeing compns. containing monoheteroyldiarylmethane direct dye or its leuco precursor)				
IT	Anthraquinone dyes Azo dyes Hair Human Oxidizing agents (hair dyeing compns. containing monoheteroyldiarylmethane direct dye or its leuco precursor)				
IT	Bromates Peroxy acids Peroxysulfates RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (hair dyeing compns. containing monoheteroyldiarylmethane direct dye or its leuco precursor)				



leuco precursor)

IT Dyes  
(indamine; hair dyeing compns. containing monoheteroyldiarylmethane direct dye or its leuco precursor)

IT Group IIIA element compounds  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(perborates; hair dyeing compns. containing monoheteroyldiarylmethane direct dye or its leuco precursor)

IT Carboxylic acids, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(peroxy; hair dyeing compns. containing monoheteroyldiarylmethane direct dye or its leuco precursor)

IT Amines, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(phenolic; hair dyeing compns. containing monoheteroyldiarylmethane direct dye or its leuco precursor)

IT Amines, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(phenylalkyl, diamines; hair dyeing compns. containing monoheteroyldiarylmethane direct dye or its leuco precursor)

IT Enzymes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(unicase; hair dyeing compns. containing monoheteroyldiarylmethane direct dye or its leuco precursor)

IT 95-55-6D, o-Aminophenol, derivs. 95-70-5, p-Toluenediamine 106-50-3, p-Phenylenediamine, biological studies 106-50-3D, p-Phenylenediamine, derivs. 108-45-2D, m-Phenylenediamine, derivs. 108-46-3D, Resorcinol, derivs. 123-30-8, p-Aminophenol 123-30-8D, p-Aminophenol, derivs. 124-43-6 591-27-5D, m-Aminophenol, derivs. 2835-95-2, 5-Amino-2-methylphenol 3486-48-4 3737-88-0 3737-89-1 3737-91-5 3810-38-6 6411-50-3 6735-60-0 6837-66-7 7722-84-1, Hydrogen peroxide, biological studies 9003-99-0, Peroxidase 9035-73-8, Oxidase 9037-29-0, Oxygenase 10231-59-1 13158-70-8 13158-71-9 13158-72-0 13158-73-1 15081-86-4 15082-04-9 17329-99-6 17330-00-6 17330-03-9 17330-04-0 18198-28-2 18198-29-3 18198-30-6 18198-31-7 22179-00-6 22179-01-7 22196-95-8 23266-29-7 23266-30-0 23266-31-1 23266-32-2 23266-33-3 23266-34-4 23266-35-5 23266-36-6 23297-28-1 23335-34-4 23642-27-5 25361-34-6 26345-38-0 32982-64-2 33609-83-5 34762-92-0 36525-76-5 **37111-44-7** 38213-80-8 38557-41-4 38557-42-5 38557-43-6 38557-44-7 38557-45-8 40683-08-7 40683-09-8 40683-10-1 40683-11-2 40683-12-3 40739-75-1 41573-35-7 42297-76-7 42297-77-8 42297-78-9 42297-79-0 42297-80-3 42297-81-4 42297-82-5 42297-83-6 42443-53-8 47334-92-9 47334-93-0 47334-95-2 47433-65-8 47433-66-9 47569-88-0 47571-92-6 47615-09-8 47645-26-1 47646-24-2 47699-20-7 47699-21-8 47700-01-6 47701-02-0 47725-05-3 47742-10-9 47742-82-5 47789-57-1 47791-05-9 47816-91-1 48230-04-2 48237-01-0 49716-03-2 50548-08-8 50584-48-0 50904-51-3 50904-52-4 50904-53-5 50904-54-6 51107-46-1 51107-47-2 54111-86-3 54117-49-6 54117-50-9 54117-51-0 54117-52-1 54117-53-2 54117-54-3 55302-96-0, 5-N-( $\beta$ -Hydroxyethyl)amino-2-methyl phenol 56413-28-6 56413-29-7 56413-30-0 56413-31-1 56413-32-2 56413-33-3 56413-34-4 56413-35-5 56413-36-6 56413-37-7 56413-38-8 56413-39-9 56523-96-7 56523-97-8 56523-98-9 56524-08-4 56524-09-5 56524-10-8 56524-11-9 57693-25-1 57693-26-2 57877-71-1 61578-24-3 61578-25-4 61578-26-5 61937-91-5 61938-02-1 61938-03-2 72828-90-1 74386-17-7 74567-64-9 79377-85-8 79377-91-6 79377-92-7

79377-98-3	79395-66-7	79395-69-0	80498-15-3, Laccase	81769-84-8
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RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(hair dyeing compns. containing monoheteroyldiarylmethane direct dye or its leuco precursor)

IT	181424-56-6	181424-60-2	181424-70-4	221525-33-3	263351-16-2
	263351-19-5	263351-20-8	264265-14-7	264265-15-8	264265-16-9
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	714955-04-1	714955-06-3	714955-09-6	714955-11-0	714955-15-4
	714955-17-6	714955-21-2	714955-26-7	714955-35-8	714955-39-2
	714955-56-3	714955-59-6	714955-61-0	714955-63-2	714955-64-3
	717137-96-7				

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(hair dyeing compns. containing monoheteroyldiarylmethane direct dye or its leuco precursor)

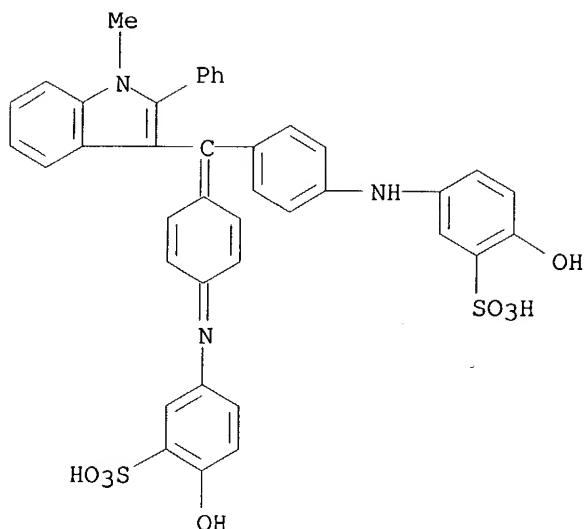
IT 37111-44-7

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(hair dyeing compns. containing monoheteroyldiarylmethane direct dye or its leuco precursor)

RN 37111-44-7 HCAPLUS

CN Benzenesulfonic acid, 2-hydroxy-5-[[4-[[4-[(4-hydroxy-3-sulphophenyl)amino]phenyl](1-methyl-2-phenyl-1H-indol-3-yl)methylene]-2,5-cyclohexadien-1-ylidene]amino]- (9CI) (CA INDEX NAME)



RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L84 ANSWER 3 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 2004:510123 HCAPLUS  
DN 141:59182  
TI Compositions containing a direct dye and a specific polymer for coloring  
of hair fibers  
IN Guerin, Frederic; Samain, Henri  
PA L'oreal, Fr.  
SO Eur. Pat. Appl., 15 pp.  
CODEN: EPXXDW  
DT Patent  
LA French  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1430876	A1	20040623	EP 2003-293258	20031219
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	FR 2848834	A1	20040625	FR 2002-16205	20021219
PRAI	FR 2002-16205	A	20021219		
AB	Comps. contain a direct dye and a specific polymer for coloring of hair fibers. The comps. comprise a direct dye, a water-soluble polymer, and an agent for increasing the viscosity.				
IC	ICM A61K007-13				
CC	62-3 (Essential Oils and Cosmetics)				
ST	hair direct dye polymer viscosity enhancer				
IT	Alcohols, biological studies				
	RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (C1-4; comps. containing direct dye and polymer for coloring of hair fibers)				
IT	Ketones, biological studies				
	RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (C3-4; comps. containing direct dye and polymer for coloring of hair fibers)				
IT	Alkanes, biological studies				

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (C5-10; compns. containing direct dye and polymer for coloring of hair fibers)

IT Phenols, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (amino, dyes; compns. containing direct dye and polymer for coloring of hair fibers)

IT Surfactants  
 (amphoteric; compns. containing direct dye and polymer for coloring of hair fibers)

IT Polyelectrolytes  
 Surfactants  
 (anionic; compns. containing direct dye and polymer for coloring of hair fibers)

IT Dyes  
 (azomethine; compns. containing direct dye and polymer for coloring of hair fibers)

IT Dyes  
 Polyelectrolytes  
 Surfactants  
 (cationic; compns. containing direct dye and polymer for coloring of hair fibers)

IT Antioxidants  
 Azo dyes  
 Dispersing agents  
 Electrolytes  
 Fluorescent dyes  
 Human  
 Opacifiers  
 Perfumes  
 Polyelectrolytes  
 Preservatives  
 Sequestering agents  
 Solvents  
 Surfactants  
 Thickening agents  
 Viscosity  
 (compns. containing direct dye and polymer for coloring of hair fibers)

IT Acids, biological studies  
 Alkali metal hydroxides  
 Polymers, biological studies  
 Tannins  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (compns. containing direct dye and polymer for coloring of hair fibers)

IT Hair preparations  
 (conditioners; compns. containing direct dye and polymer for coloring of hair fibers)

IT Hair preparations  
 (creams; compns. containing direct dye and polymer for coloring of hair fibers)

IT Dyes  
 (direct; compns. containing direct dye and polymer for coloring of hair fibers)

IT Phenols, biological studies  
 Porphyrins  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (dyes; compns. containing direct dye and polymer for coloring of hair fibers)

IT Hair preparations

(gels; compns. containing direct dye and polymer for coloring of hair fibers)

IT Hair preparations  
(lotions; compns. containing direct dye and polymer for coloring of hair fibers)

IT Phenols, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(naphthols, dyes; compns. containing direct dye and polymer for coloring of hair fibers)

IT Surfactants  
(nonionic; compns. containing direct dye and polymer for coloring of hair fibers)

IT Amines, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(phenolic, dyes; compns. containing direct dye and polymer for coloring of hair fibers)

IT Carboxylic acids, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(polycarboxylic, salts; compns. containing direct dye and polymer for coloring of hair fibers)

IT Carboxylic acids, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(polycarboxylic; compns. containing direct dye and polymer for coloring of hair fibers)

IT Alcohols, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(polyhydric, ethers; compns. containing direct dye and polymer for coloring of hair fibers)

IT Phenols, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(polyphenols, nonpolymeric; compns. containing direct dye and polymer for coloring of hair fibers)

IT Hair preparations  
(sprays; compns. containing direct dye and polymer for coloring of hair fibers)

IT Polymers, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(water-soluble; compns. containing direct dye and polymer for coloring of hair fibers)

IT 64-19-7D, Acetic acid, C1-4 alkyl esters 69-72-7, o-Hydroxybenzoic acid, biological studies 72-48-0, Alizarin 79-06-1D, Acrylamide, polymers 79-10-7D, Acrylic acid, polymers 81-48-1, Solvent Violet 13 81-54-9, Purpurin 82-33-7 83-72-7, Lawsone 85-23-4, Spinulosin 87-66-1, Pyrogallol 87-69-4, Tartaric acid, biological studies 88-99-3, Phthalic acid, biological studies 91-56-5, Isatin 92-31-9, Basic Blue 17 96-91-3, 2-Amino-4,6-dinitrophenol 99-06-9, m-Hydroxybenzoic acid, biological studies 99-56-9, 1,2-Diamino-4-nitrobenzene 99-57-0, 2-Amino-4-nitrophenol 99-96-7, p-Hydroxybenzoic acid, biological studies 100-51-6, Benzyl alcohol, biological studies 108-46-3, Resorcinol, biological studies 110-71-4 116-85-8, Disperse Red 15 121-88-0, 2-Amino-5-nitrophenol 124-04-9, Adipic acid, biological studies 128-95-0, Disperse Violet 1 139-85-5, Protocatechuic aldehyde 144-62-7, Oxalic acid, biological studies 149-91-7, Gallic acid, biological studies 299-27-4, Potassium Gluconate 458-37-7, Curcumin 477-73-6, Basic Red 2 481-39-0, Juglone 526-95-4, Gluconic acid 526-95-4D, Gluconic acid, salts 527-07-1, Sodium Gluconate 548-62-9, Basic Violet 3 569-77-7, Purpurogallin 587-98-4, Acid Yellow 36 610-81-1, 4-Amino-3-nitrophenol 632-99-5, Basic Violet 14 633-03-4,

Basic Green 1 633-96-5, Acid Orange 7 1064-48-8, Acid Black 1 1151-98-0, Apigenidin 1220-94-6, Disperse Violet 4 1260-17-9, Carminic acid 1320-07-6, Acid Orange 24 1694-09-3, Acid Violet 49 1934-21-0, Acid Yellow 23 2390-60-5, Basic Blue 7 2475-45-8, Disperse Blue 1 2475-46-9, Disperse Blue 3 2580-56-5, Basic Blue 26 2706-28-7, Acid Yellow 9 2871-01-4 2872-48-2, Disperse Red 11 3179-89-3, Disperse Red 17 3179-90-6, Disperse Blue 7 3486-30-4, Acid Blue 7 3567-66-6, Acid Red 33 4368-56-3, Acid Blue 62 4430-18-6, Acid Violet 43 4926-55-0 5307-14-2, 1,4-Diamino-2-nitrobenzene 6358-09-4 6441-93-6 6472-57-7, Acid Blue 91 6915-15-7, Malic acid 9003-06-9, Acrylic acid-Acrylamide copolymer 10442-83-8 12217-41-3, Basic Blue 22 12221-52-2, Basic Red 22 13556-29-1 18499-92-8, Kermesic acid 19222-41-4, Ammonium Gluconate 20721-50-0, Disperse Black 9 22036-97-1 22366-99-0 23946-41-0 24905-87-1 26381-41-9, Basic Brown 16 26590-05-6, Acrylamide-diallyldimethylammonium chloride copolymer 29705-39-3 33229-34-4 47569-30-2 50610-28-1 52136-23-9 52136-25-1 52551-67-4 56330-88-2 56932-44-6 56932-45-7 59820-43-8 59820-63-2 65235-31-6 66095-81-6 **66612-11-1** 66612-19-9 68123-13-7, Basic Blue 99 68259-00-7 68391-30-0, Basic Red 76 68391-31-1, Basic Yellow 57 68651-46-7, Indigo 69418-26-4 74153-51-8 77061-58-6 80062-31-3 81612-54-6 82576-75-8 84041-77-0 86419-68-3 97404-02-9 99788-75-7 104333-00-8 104516-93-0 108388-79-0 131657-78-8 141973-33-3 154442-49-6 176742-32-8, Basic Brown 17 359868-06-7 360069-60-9, C.I. Disperse Violet 15 708270-17-1

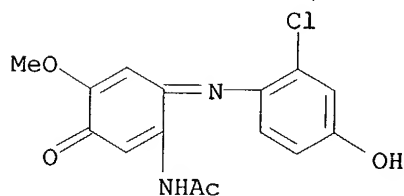
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(comps. containing direct dye and polymer for coloring of hair fibers)

IT **66612-11-1**

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(comps. containing direct dye and polymer for coloring of hair fibers)

RN 66612-11-1 HCAPLUS

CN Acetamide, N-[6-[(2-chloro-4-hydroxyphenyl)imino]-4-methoxy-3-oxo-1,4-cyclohexadien-1-yl]- (9CI) (CA INDEX NAME)



L84 ANSWER 4 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2004:291168 HCAPLUS

DN 140:308967

TI Two-component hair dye compositions containing dissociable direct dyes

IN Pratt, Dominic; Kawagishi, Toshio

PA Kao Corp., Japan; Fuji Photo Film Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 21 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.

KIND

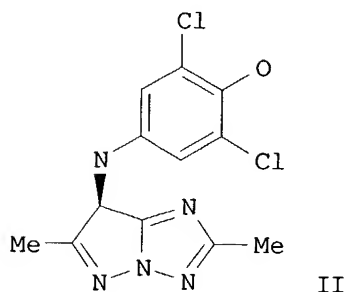
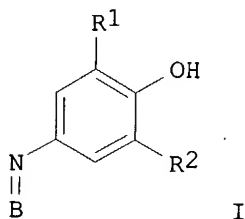
DATE

APPLICATION NO.

DATE

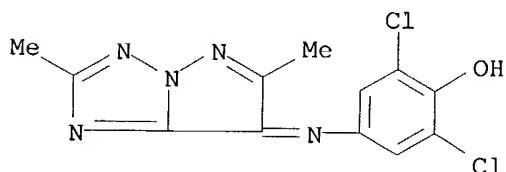
KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

PI	JP 2004107223	A2	20040408	JP 2002-269182	20020913
PRAI	JP 2002-269182		20020913		
OS	MARPAT 140:308967				
GI					



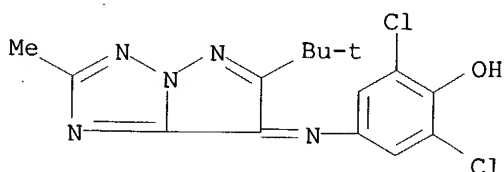
- AB The compns., which give long-lasting bright color to hair, do not stain skin, and also have bleaching effect, comprise a 1st agent containing dissociable direct dyes I [R1, R2 = H, C1-5 alkyl, acylamino, alkylsulfonylamino, electron-withdrawing group; B = condensed azoles Q1-Q4; Za, Zb, Zc, Z1, Z2, Z3 = N, CR5;; Zb and/or Zc = CR5;' Z1, Z2, and/or Z3 =N; R3-R5 = H, halo, (un)substituted C1-5 alkyl, C1-4 alkoxy, C1-4 alkylthio, arylthio, heteroarylthio, SCH2Ph, (un)substituted acyl, etc.] or their salts and alkaline agents and a 2nd agent containing oxidizing agents. A composition (pH 10) containing a dissociative dye II, aqueous NH3, HOCH2CH2NH2, and additives was mixed with an oxidizing agent containing H2O2 and applied to a goat hair at 30°. The hair was let stand for 30 min, shampooed, and dried to be dyed well.
- IC ICM A61K007-13  
ICS D06P003-08
- CC 62-3 (Essential Oils and Cosmetics)
- ST two component hair dye dissociative direct dye; anilidenepyrzotriazole  
two component bleaching hair dye; hydroxyaniline triazolopyrazolydene  
two component bleaching hair dye
- IT Dyes  
(direct; two-component hair dye compns. containing dissociable direct dyes in alkaline agents which have bleaching effect and give long-lasting bright color)
- IT Hair preparations  
(dyes; two-component hair dye compns. containing dissociable direct dyes in alkaline agents which have bleaching effect and give long-lasting bright color)
- IT 7722-84-1, Hydrogen peroxide, biological studies **460988-76-5**  
**460988-77-6**  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(two-component **hair** dye compns. containing dissociable direct dyes in alkaline agents which have bleaching effect and give long-lasting bright color)
- IT **460988-76-5 460988-77-6**  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(two-component **hair** dye compns. containing dissociable direct dyes in alkaline agents which have bleaching effect and give long-lasting bright color)
- RN 460988-76-5 HCAPLUS

CN Phenol, 2,6-dichloro-4-[(2,6-dimethyl-7H-pyrazolo[1,5-b][1,2,4]triazol-7-ylidene)amino]- (9CI) (CA INDEX NAME)



RN 460988-77-6 HCAPLUS

CN Phenol, 2,6-dichloro-4-[[6-(1,1-dimethylethyl)-2-methyl-7H-pyrazolo[1,5-b][1,2,4]triazol-7-ylidene]amino]- (9CI) (CA INDEX NAME)



L84 ANSWER 5 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2004:211990 HCAPLUS

DN 140:258599

TI Preparation of hair dye compositions

IN Pratt, Dominic; Kawagishi, Toshio

PA Kao Corporation, Japan; Fuji Photo Film Co., Ltd.

SO Eur. Pat. Appl., 26 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

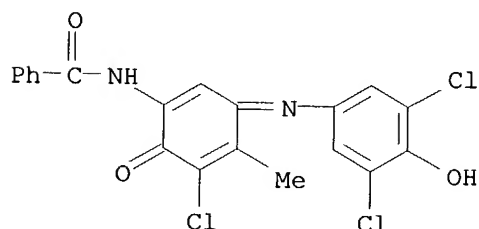
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1398021	A1	20040317	EP 2003-20453	20030912
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2004107222	A2	20040408	JP 2002-269172	20020913
	US 2004139560	A1	20040722	US 2003-660475	20030912
PRAI	JP 2002-269172	A	20020913		

OS MARPAT 140:258599

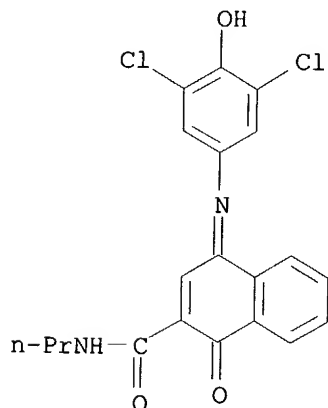
AB A hair dye composition contains. a dissociative direct dye. The hair dye composition is capable of strongly dyeing the hair with a vivid color tone without causing decomposition of the dye during the dyeing process, and exhibits excellent resistance against sunlight, hair washing, perspiration, friction and heat, and has a high stability against an alkali and an oxidizing agent, has a high dyeing property, and shows less color fade over time. N-propyl-1-hydroxy-2-naphthamide was treated with 2,6-dichloroquinone-4-chloroimide in the presence of triethylamine followed by further treatment with dilute HCl in MeCN to give a dye. Thus, a hair dye formulation contained a dye 0.5, monoethanolamine 1, EtOH 15, propylene glycol 10, PEG octyl dodecyl ether 10, PEG tridecyl ether 9, oleic diethanolamide 8, oleyl alc. 2, ammonium chloride qs, LPG 10, and water qs to 100%.



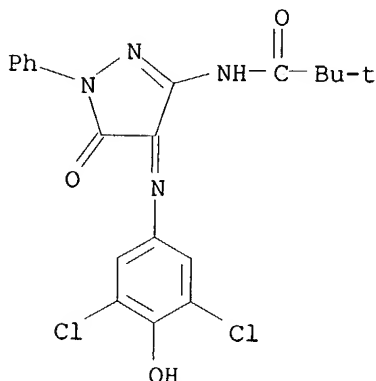
IC ICM A61K007-13  
 CC 62-3 (Essential Oils and Cosmetics)  
 Section cross-reference(s): 28  
 ST hair dye direct prepn  
 IT Dyes  
 (direct; preparation of hair dye compns.)  
 IT Hair preparations  
 (dyes; preparation of hair dye compns.)  
 IT Oxidizing agents  
 (preparation of hair dye compns.)  
 IT **670224-72-3P 670224-73-4P 670224-74-5P**  
 670224-75-6P  
 RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of hair dye compns.)  
 IT 101-38-2 3743-14-4 5930-28-9 35310-91-9 56278-50-3,  
 2-Benzothiazoleacetonitrile 670224-76-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of hair dye compns.)  
 IT **670224-72-3P 670224-73-4P 670224-74-5P**  
 RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of hair dye compns.)  
 RN 670224-72-3 HCAPLUS  
 CN Benzamide, N-[5-chloro-3-[(3,5-dichloro-4-hydroxyphenyl)imino]-4-methyl-6-oxo-1,4-cyclohexadien-1-yl]- (9CI) (CA INDEX NAME)



RN 670224-73-4 HCAPLUS  
 CN 2-Naphthalenecarboxamide, 4-[(3,5-dichloro-4-hydroxyphenyl)imino]-1,4-dihydro-1-oxo-N-propyl- (9CI) (CA INDEX NAME)



RN 670224-74-5 HCAPLUS  
 CN Propanamide, N-[4-[(3,5-dichloro-4-hydroxyphenyl)imino]-4,5-dihydro-5-oxo-1-phenyl-1H-pyrazol-3-yl]-2,2-dimethyl- (9CI) (CA INDEX NAME)



RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L84 ANSWER 6 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2003:950811 HCAPLUS  
 DN 140:8458  
 TI Hair permanent wave preparations containing protein disulfide isomerase, hair dyes and conditioning agents especially thiol-or disulfide group-including compounds  
 IN Kleen, Astrid; Meinigke, Bernd; Saettler, Andreas; Howorka, Wilfried; Suenger, Georg  
 PA Henkel Kommanditgesellschaft auf Aktien, Germany  
 SO PCT Int. Appl., 59 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003099242	A1	20031204	WO 2003-EP5276	20030520
	W: JP, US				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
	DE 10224248	A1	20031211	DE 2002-10224248	20020529
	DE 10224249	A1	20031211	DE 2002-10224249	20020529
PRAI	DE 2002-10224248	A	20020529		
	DE 2002-10224249	A	20020529		
AB	The invention relates to a method for the enzymic treatment of keratin fibers, in particular human hair, using cosmetic agents that contain the enzyme protein disulfide isomerase. The invention also relates to the agent containing said enzyme that is used in the method and to the use thereof for maintaining keratin fibers and/or for permanently shaping said fibers. The formulations contain keratin-reducing agents, complexing agents, surfactants, direct dyes, conditioners, agents to set pH 4-9, preferably 7.3-7.7. The formulations further contain thiol-or disulfide group-including hair dyes. Thus dinitrophenyl and nitrophenyl dyes were coupled with cysteamine to form disulfide bridge-containing dyes. Permanent				

wave dyeing formulation was prepared from (a) a buffer solution composed of (g): sodium monohydrogen phosphate 8.366, EDTA-sodium salt 1.750; DL-dithiothreitol 0.154; acetic acid to pH 7.5; water to 100; (b) 0.00357 g solution containing protein disulfide isomerase (10% active substance) in 10 mL of buffer (a) to result Solution 1; 18.8 mL of the buffer was mixed with solution 1 to result the enzyme-containing application solution; (c) dye solution (Solution 2) containing (g):tetrasodium 2,2'-[dithiobis(p-phenyleneazo)]bis[8-amino-1-hydroxy-3,6-naphthalenedisulfonate] 2.008; sodium monohydrogen phosphate 1.673; EDTA-sodium 0.351; acetic acid to pH 7.5; water to 200; 20 mL of Solution 1 and 20 mL of Solution 2 were applied on exptl. hair.

IC ICM A61K007-06  
ICS A61K007-09

CC 62-3 (Essential Oils and Cosmetics)

ST hair permanent wave prepn protein disulfide isomerase dye conditioner

IT Hair preparations  
(conditioners; hair permanent wave prepn. containing protein disulfide isomerase, hair dyes and conditioning agents especially thiol-or disulfide group-including compds.)

IT Dyes  
(direct; hair permanent wave prepn. containing protein disulfide isomerase, hair dyes and conditioning agents especially thiol-or disulfide group-including compds.)

IT Azo dyes  
(disulfide group containing; hair permanent wave prepn. containing protein disulfide isomerase, hair dyes and conditioning agents especially thiol-or disulfide group-including compds.)

IT Nitro compounds  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(dyes, disulfide group containing; hair permanent wave prepn. containing protein disulfide isomerase, hair dyes and conditioning agents especially thiol-or disulfide group-including compds.)

IT Reducing agents  
(for keratin; hair permanent wave prepn. containing protein disulfide isomerase, hair dyes and conditioning agents especially thiol-or disulfide group-including compds.)

IT Complexing agents  
Disulfide group  
Human  
Surfactants  
Thickening agents  
pH  
(hair permanent wave prepn. containing protein disulfide isomerase, hair dyes and conditioning agents especially thiol-or disulfide group-including compds.)

IT Thiols (organic), biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(hair permanent wave prepn. containing protein disulfide isomerase, hair dyes and conditioning agents especially thiol-or disulfide group-including compds.)

IT Keratins  
RL: COS (Cosmetic use); CPS (Chemical process); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)  
(hair permanent wave prepn. containing protein disulfide isomerase, hair dyes and conditioning agents especially thiol-or disulfide group-including compds.)

IT Hair preparations  
(permanent wave; hair permanent wave prepn. containing protein disulfide

- isomerase, hair dyes and conditioning agents especially thiol-or disulfide group-including compds.)
- IT 380897-77-8  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (Palatine Chrome Green; hair permanent wave prepns. containing protein disulfide isomerase, hair dyes and conditioning agents especially thiol-or disulfide group-including compds.)
- IT 62649-65-4  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (as Disperse Violet 15; hair permanent wave prepns. containing protein disulfide isomerase, hair dyes and conditioning agents especially thiol-or disulfide group-including compds.)
- IT 84-65-1, Anthraquinone 500-85-6, Indophenol  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (derivs., disulfide group containing dyes; hair permanent wave prepns. containing protein disulfide isomerase, hair dyes and conditioning agents especially thiol-or disulfide group-including compds.)
- IT 88-74-4, Benzenamine, 2-nitro- 91-29-2 96-91-3, Picramic acid  
 96-93-5 99-56-9, 1,2-Diamino-4-nitrobenzene 100-01-6,  
 4-Amino-1-nitrobenzene, biological studies 116-85-8, Disperse Red 15  
 119-34-6, 4-Amino-2-nitrophenol 119-72-2 128-95-0, Disperse Violet 1  
 570-24-1, 1-Amino-2-methyl-6-nitrobenzene 606-57-5 610-81-1,  
 4-Amino-3-nitrophenol 632-99-5, Basic Violet 14 730-40-5, Disperse  
 Orange 3 1220-94-6, Disperse Violet 4 2390-60-5, Basic Blue 7  
 2475-45-8, Disperse Blue 1 2475-46-9, Disperse Blue 3 2580-56-5, Basic  
 Blue 26 2784-89-6, HC Red 1 2788-74-1, 4-Ethylamino-3-nitrobenzoic  
 acid 2871-01-4, HC Red 3 3179-90-6, Disperse Blue 7 3769-62-8,  
 Gallion 4926-55-0, HC Yellow 2 5099-39-8 5307-14-2,  
 1,4-Diamino-2-nitrobenzene 5610-64-0, Acid Black 52 5850-35-1, Acid  
 Blue 29 6086-29-9 6247-27-4, Mordant Brown 4 6285-57-0 6358-09-4  
 7221-27-4 10173-66-7 20721-50-0, Disperse Black 9 24905-87-1, HC Red  
 7 26381-41-9, Basic Brown 16 27080-42-8 31555-68-7 33229-34-4, HC  
 Blue 2 37318-49-3, Protein disulfide isomerase 41959-35-7  
 54381-08-7, HC Orange 1 56932-44-6, HC Yellow 5 57524-50-2, HC Orange  
 5 59320-13-7, HC Yellow 12 59820-43-8, HC Yellow 4 64993-07-3  
 65235-31-6 68123-13-7, Basic Blue 99 68391-30-0, Basic Red 76  
 68391-31-1, Basic Yellow 57 69825-83-8, 6-Nitro-2,5-diaminopyridine  
 77484-77-6, 3-Amino-6-methylamino-2-nitropyridine 82576-75-8, HC Violet  
 1 84041-77-0 92952-81-3, HC Red BN 93923-57-0 94158-13-1, HC Red  
 13 95576-89-9, HC Red 10 95576-92-4, HC Red 11 99610-72-7  
 100418-33-5 104333-00-8, HC Yellow 6 117907-43-4 131657-78-8,  
 2-Chloro-6-ethylamino-4-nitrophenol 132885-85-9, HC Blue 12  
 176742-32-8, Basic Brown 17 346593-13-3 360069-60-9, C.I. Disperse  
 Violet 15  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (hair permanent wave prepns. containing protein disulfide isomerase, hair  
 dyes and conditioning agents especially thiol-or disulfide group-including  
 compds.)
- IT 627906-89-2P  
 RL: COS (Cosmetic use); RCT (Reactant); SPN (Synthetic preparation); BIOL  
 (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES  
 (Uses)  
 (hair permanent wave prepns. containing protein disulfide isomerase, hair  
 dyes and conditioning agents especially thiol-or disulfide group-including  
 compds.)
- IT 84034-79-7P 627906-90-5P  
 RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological  
 study); PREP (Preparation); USES (Uses)  
 (hair permanent wave prepns. containing protein disulfide isomerase, hair

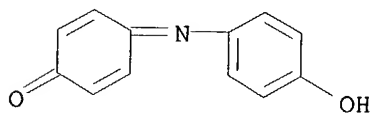
dyes and conditioning agents especially thiol-or disulfide group-including compds.)

IT 118-97-8, 4-Chloro-3,5-dinitrobenzoic acid 156-57-0, Cysteamine hydrochloride 351-32-6 16904-32-8, Cysteamine dihydrochloride  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hair permanent wave prepns. containing protein disulfide isomerase, hair dyes and conditioning agents especially thiol-or disulfide group-including compds.)

IT 500-85-6, Indophenol  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (derivs., disulfide group containing dyes; **hair** permanent wave prepns. containing protein disulfide isomerase, **hair** dyes and conditioning agents especially thiol-or disulfide group-including compds.)

RN 500-85-6 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX NAME)



RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L84 ANSWER 7 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2003:282162 HCAPLUS  
 DN 138:292389  
 TI Oxidative hair dyes containing aromatic dicarbonyl compounds, other dyes and color intensifiers  
 IN Gross, Wibke; Oberkobusch, Doris; Hoeffkes, Horst  
 PA Henkel Kommanditgesellschaft Auf Aktien, Germany  
 SO Eur. Pat. Appl., 23 pp.  
 CODEN: EPXXDW

DT Patent  
 LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1300134	A2	20030409	EP 2002-21429	20020925
	EP 1300134	A3	20030423		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	DE 10148843	A1	20030410	DE 2001-10148843	20011004
PRAI	DE 2001-10148843	A	20011004		
OS	MARPAT 138:292389				
AB	The invention concerns hair dyes that contain aromatic dicarbonyl compds. and substances selected from the group of (a) CH-acids; (b) primary and secondary aromatic amines, hydroxydes, nitrogen-containing heterocycles; further the compns. can contain color intensifiers and direct dyes. Thus in a hair dyeing experiment 3 mmol 1,2,3,3-tetramethylindolinium iodide and 0.41 g sodium acetate were mixed in 30 g water; 3 mmol 4-dimethylamino-6-methylisophthalaldehyde were added and pH6 was set; the solution was used to dye hair; red-violet color was obtained.				
IC	ICM A61K007-13				
	ICS D06P003-14				

CC 62-3 (Essential Oils and Cosmetics)  
 ST oxidative hair dye arom dicarbonyl compd  
 IT Surfactants  
     (anionic; oxidative hair dyes containing aromatic dicarbonyl compds., other  
     dyes and color intensifiers)  
 IT Amines, biological studies  
     Dicarbonyl compounds  
     RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
     (aromatic; oxidative hair dyes containing aromatic dicarbonyl compds.,  
 other dyes  
     and color intensifiers)  
 IT Amines, biological studies  
     RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
     (aryl, heterocyclic; oxidative hair dyes containing aromatic dicarbonyl  
     compds., other dyes and color intensifiers)  
 IT Amines, biological studies  
     RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
     (aryl, secondary; oxidative hair dyes containing aromatic dicarbonyl  
 compds.,  
     other dyes and color intensifiers)  
 IT Dyes  
     (direct; oxidative hair dyes containing aromatic dicarbonyl compds., other  
     dyes and color intensifiers)  
 IT Hair preparations  
     (dyes, oxidative; oxidative hair dyes containing aromatic dicarbonyl  
 compds.,  
     other dyes and color intensifiers)  
 IT Hair preparations  
     (dyes; oxidative hair dyes containing aromatic dicarbonyl compds., other  
 dyes  
     and color intensifiers)  
 IT Surfactants  
     (nonionic; oxidative hair dyes containing aromatic dicarbonyl compds., other  
     dyes and color intensifiers)  
 IT Oxidizing agents  
     (oxidative hair dyes containing aromatic dicarbonyl compds., other dyes and  
     color intensifiers)  
 IT Aromatic compounds  
     Heterocyclic compounds  
     RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
     (oxidative hair dyes containing aromatic dicarbonyl compds., other dyes and  
     color intensifiers)  
 IT Surfactants  
     (zwitterionic; oxidative hair dyes containing aromatic dicarbonyl compds.,  
     other dyes and color intensifiers)  
 IT 50-21-5D, salts of 59-48-3, Oxindole 62-53-3, Aniline, biological  
 studies 64-18-6D, Formic acid, salts of 64-19-7D, Acetic acid, salts  
 of 65-49-6, 4-Aminosalicylic acid 67-52-7, Barbituric acid 71-00-1,  
 L-Histidine, biological studies 77-92-9D, salts of 79-09-4D, Propanoic  
 acid, salts of 79-14-1D, salts of 83-07-8, 4-Aminoantipyrine  
 83-30-7, 2,4,6-Trihydroxybenzoic acid 83-33-0, Indan-1-one 83-56-7,  
 1,5-Dihydroxynaphthalene 84-65-1D, Anthraquinone, derivs. 87-02-5  
 87-66-1, Pyrogallol 87-69-4D, salts of 88-21-1, 2-Aminobenzenesulfonic  
 acid 88-74-4, 2-Nitroaniline 89-25-8, 1-Phenyl-3-methylpyrazol-5-one  
 89-57-6, 5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid  
 90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0 91-29-2  
 91-95-2, 3,3',4,4'-Tetraaminodiphenyl 92-44-4, 2,3-Dihydroxynaphthalene  
 92-65-9 93-05-0 95-54-5, o-Phenylenediamine, biological studies  
 95-55-6, 2-Aminophenol 95-70-5, 2,5-Diaminotoluol 95-88-5,

4-Chlororesorcin 96-91-3, Picramic acid 96-93-5 98-37-3,  
 3-Amino-4-hydroxy-benzenesulfonic acid 98-79-3, Pyrrolidone-5-carboxylic  
 acid 99-05-8, 3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol  
 99-31-0, 5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic acid  
 99-56-9, 1,2-Diamino-4-nitrobenzene 99-98-9 100-01-6, 4-Nitroaniline,  
 biological studies 101-54-2, N-Phenyl-1,4-phenylenediamine 101-77-9  
 101-80-4, 4,4'-Diaminodiphenylether 102-32-9, 3,4-Dihydroxyphenylacetic  
 acid 102-33-0 106-50-3, p-Phenylenediamine, biological studies  
 107-92-6D, Butanoic acid, salts of 108-45-2, m-Phenylenediamine,  
 biological studies 108-46-3, Resorcin, biological studies 108-72-5,  
 1,3,5-Triaminobenzene 108-73-6, Phloroglucin 109-00-2,  
 3-Hydroxypyridine 109-52-4D, Pentanoic acid, salts of 110-85-0,  
 Piperazine, biological studies 110-86-1, Pyridine, biological studies  
 110-89-4, Piperidine, biological studies 116-63-2 118-12-7 118-70-7,  
 4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 119-34-6  
 119-59-5, 4,4'-Diaminodiphenylsulfoxide 119-70-0, 4,4'-  
 Diaminodiphenylamine-2-sulfonic acid 121-47-1, 3-Aminobenzenesulfonic  
 acid 121-57-3, 4-Aminobenzenesulfonic acid 123-30-8, 4-Aminophenol  
 123-31-9, Hydroquinone, biological studies 123-75-1, Pyrrolidine,  
 biological studies 126-81-8 139-65-1, 4,4'-Diaminodiphenylsulfide  
 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine 142-08-5,  
 2-Hydroxypyridine 142-62-1D, Hexanoic acid, salts of 147-85-3,  
 Proline, biological studies 149-91-7, Gallic acid, biological studies  
 150-13-0, 4-Aminobenzoic acid 150-19-6, 3-Methoxyphenol 150-75-4,  
 4-Methylaminophenol 150-76-5, 4-Methoxyphenol 156-81-0,  
 2,4-Diaminopyrimidine 288-13-1, Pyrazole 288-32-4, Imidazole,  
 biological studies 288-88-0, 1H-1,2,4-Triazole 452-58-4,  
 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0 488-87-9,  
 2,5-Dimethylresorcin 496-73-1, 4-Methylresorcin 498-94-2,  
 Piperidine-4-carboxylic acid 498-95-3, Piperidine-3-carboxylic acid  
**500-85-6D**, Indophenol, derivs. 504-15-4 504-17-6,  
 Thiobarbituric acid 504-24-5, 4-Aminopyridine 504-29-0,  
 2-Aminopyridine 526-95-4D, D-Gluconic acid, salts of 533-31-3,  
 3,4-Methylenedioxyphenol 533-73-3, Hydroxyhydroquinone 535-75-1,  
 Piperidine-2-carboxylic acid 535-87-5, 3,5-Diaminobenzoic acid  
 537-65-5, 4,4'-Diaminodiphenylamine 553-86-6, 2-Coumaranone 570-24-1,  
 6-Nitro-o-toluidine 578-66-5, 8-Aminoquinoline 580-17-6,  
 3-Aminoquinoline 580-22-3, 2-Aminoquinoline 582-17-2,  
 2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6,  
 2,3-Diaminobenzoic acid 605-59-4 606-23-5, Indan-1,3-dione 606-55-3  
 606-57-5, 2-Amino-1-nitronaphthalene 608-08-2, 3-Indoxyl acetate  
 608-25-3, 2-Methylresorcin 608-97-9, Benzenepentamine 609-20-1  
 610-74-2, 2,5-Diaminobenzoic acid 610-81-1 611-03-0,  
 2,4-Diaminobenzoic acid 611-98-3, 4,4'-Diaminobenzophenone 614-16-4,  
 Benzoylacetonitrile 614-82-4, 2,4-Dihydroxyphenylacetic acid 615-66-7  
 615-71-4, 1,2,4-Triaminobenzene 616-45-5, Pyrrolidone 616-47-7,  
 1-Methyl-Imidazole 619-05-6, 3,4-Diaminobenzoic acid 626-64-2,  
 4-Hydroxypyridine 636-25-9, 2,5-Diaminophenol 873-74-5,  
 4-Aminobenzonitrile 876-87-9 934-22-5, 5-Aminobenzimidazole  
 1004-74-6, 2,4,5,6-Tetraaminopyrimidine 1004-75-7, 4-Hydroxy-2,5,6-  
 triaminopyrimidine 1080-74-6 1123-55-3, 7-Aminobenzothiazole  
 1123-93-9, 5-Aminobenzothiazole 1125-60-6, 5-Aminoisoquinoline  
 1197-55-3, 4-Aminophenylacetic acid 1455-77-2, 3,5-Diamino-1,2,4-  
 triazole 1571-72-8, 3-Amino-4-hydroxy-benzoic acid 1820-80-0,  
 3-Aminopyrazole 2374-03-0, 4-Amino-3-hydroxy-benzoic acid 2654-52-6  
 2688-48-4, 5-Hydroxy-2-Coumaranone 2688-49-5 2785-06-0 2835-95-2,  
 2-Methyl-5-aminophenol 2835-98-5 2835-99-6, 4-Amino-3-methylphenol  
 2836-04-6 2845-88-7 2871-01-4 3119-93-5 3131-52-0,  
 5,6-Dihydroxyindole 3158-63-2, 1,3-Dimethylthiobarbituric acid

3167-49-5, 6-Aminonicotinic acid 3204-61-3, 1,2,4,5-Tetraaminobenzene  
 3240-72-0, 2,4-Dihydroxy-5,6-diaminopyrimidine 3342-78-7,  
 2-Aminophenylacetic acid 3468-11-9 3769-62-8, Gallion 3812-32-6D,  
 Carbonate, salts of 4318-76-7, 2,5-Diaminopyridine 4331-29-7,  
 7-Aminobenzimidazole 4444-26-2, Benzenehexamine 4928-43-2,  
 2-Dimethylamino-5-aminopyridine 5007-67-0, 3,3',4,4'-  
 Tetraaminobenzophenone 5099-39-8 5131-58-8 5192-03-0, 5-Aminoindole  
 5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole 5217-47-0,  
 1,3-Diethylthiobarbituric acid 5260-37-7 5307-02-8, 2,5-Diaminoanisole  
 5307-14-2, 1,4-Diamino-2-nitrobenzene 5318-27-4, 6-Aminoindole  
 5345-47-1, 2-Aminonicotinic acid 5418-63-3 5434-20-8, 3-Aminophthalic  
 acid 5466-88-6, 2H-1,4-Benzoxazin-3(4H)-one 5718-83-2,  
 Rhodanine-3-acetic acid 5850-35-1, Acid Blue 29 5959-52-4 6201-65-6,  
 2-Chlororesorcin 6247-27-4, Mordant Brown 4 6259-50-3 6271-44-9  
 6358-09-4, 2-Amino-6-chloro-4-nitrophenol 6399-72-0 6628-04-2,  
 4-Aminoquinoline 6634-82-8 6967-12-0, 6-Aminoindazole 7218-02-2  
 7336-20-1 7429-90-5D, Aluminum, derivs 7439-89-6D, Iron, derivs  
 7439-93-2D, Lithium, derivs 7439-95-4D, Magnesium, derivs 7439-96-5D,  
 Manganese, derivs 7440-09-7D, Potassium, derivs 7440-23-5D, Sodium,  
 derivs 7440-24-6D, Strontium, derivs 7440-39-3D, Barium, derivs  
 7440-48-4D, Cobalt, derivs 7440-50-8D, Copper, derivs 7440-66-6D,  
 Zinc, derivs 7440-70-2D, Calcium, derivs 7575-35-1 7722-84-1,  
 Hydrogen peroxide, biological studies 7749-47-5, 2-Amino-4-methoxy-6-  
 methylpyrimidine 7768-28-7, 2-(2-Hydroxyethyl)-phenol 10173-66-7  
 13066-97-2 13598-36-2D, Phosphonic acid, salts of 13754-19-3,  
 4,5-Diaminopyrimidine 14265-44-2D, Phosphate, salts of 14268-66-7,  
 3,4-Methylenedioxyaniline 14338-36-4, 3-Aminophenylacetic acid  
 14808-79-8D, Sulfate, salts of 14933-76-7 16082-33-0,  
 3,5-Diaminopyrazole 16214-27-0, Indan-1,2-dione 16859-86-2  
 16867-03-1, 2-Amino-3-hydroxypyridine 17672-22-9 19335-11-6,  
 5-Aminoindazole 20048-92-4

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(oxidative hair dyes containing aromatic dicarbonyl compds., other  
 dyes and color intensifiers)

IT 20103-09-7 22715-34-0, 2-Hydroxy-4,5,6-triaminopyrimidine 23244-87-3,  
 2,4,5-Triaminopyridine 23894-07-7 24905-87-1 26216-16-0 27841-29-8  
 28020-38-4, 2,3-Diamino-6-methoxypyridine 29539-03-5,  
 5,6-Dihydroxyindoline 29705-39-3 31835-64-0, 3-Amino-3'-nitrobiphenyl  
 31905-57-4D, Nitrophenylenediamine, derivs. 32479-73-5,  
 1,3-Diethylbarbituric acid 35490-72-3 36518-76-0 37705-82-1,  
 2,4-Diaminobenzonitrile 41927-50-8 41946-53-6 42952-29-4  
 43093-74-9D, Nitroaminophenol, derivs. 50610-28-1 50610-33-8  
 51387-92-9 52943-88-1, 1-Phenyl-3-methyl-4,5-diaminopyrazole  
 55302-96-0 55952-56-2 56932-44-6 58480-17-4 60126-36-5  
 61224-35-9 61693-42-3, 3-Amino-2,4-dichlorophenol 62496-02-0,  
 2-Methylamino-4,5,6-triaminopyrimidine 63969-46-0, Bis-(5-amino-2-  
 hydroxyphenyl)-methane 64693-48-7 64993-07-3, 5-Amino-6-nitrobenzo-1,3-  
 dioxole 66566-48-1 66635-40-3, 4,4'-Diaminostilbene dihydrochloride  
 67608-58-6 67608-59-7 68391-32-2 69825-83-8, 6-Nitro-2,5-  
 diaminopyridine 70643-19-5, 2,4-Diaminophenoxyethanol 71134-97-9  
 77484-77-6 79352-72-0, 2-Aminomethyl-4-aminophenol 81892-72-0,  
 1,3-Bis-(2,4-diaminophenoxy)-propane 82576-75-8, HC Violet 1  
 83763-47-7 84540-47-6, 2,6-Dihydroxy-3,4-dimethylpyridine 84540-50-1  
 85561-52-0, 1-Phenyl-4,5-diaminopyrazole 85679-78-3,  
 2,6-Dimethoxy-3,5-diaminopyridine 85926-99-4, 4-Hydroxyindoline  
 90817-34-8 93841-24-8 93923-57-0 95576-89-9, HC Red 10 99855-61-5  
 104333-09-7, 2-Hydroxymethyl-4-aminophenol 110102-86-8 110952-46-0  
 114260-09-2 114402-54-9, 1,3-Bis-(4-aminophenylamino)-propane  
 115423-85-3 115423-86-4 117907-43-4 126335-43-1,



2-(2,5-Diaminophenoxy) ethanol 128729-30-6, 1,3-Bis-[N-(4-aminophenyl)-2-hydroxyethylamino]-2-propanol 130582-56-8, 1,3-Bis-(4-aminophenylamino)-2-propanol 137290-78-9 137290-86-9 141614-04-2 141614-05-3  
 145092-00-8, 3-Amino-5-hydroxypyrazole 146658-65-3 149330-25-6  
 155601-17-5, 1-(2-Hydroxyethyl)-4,5-diaminopyrazole 159519-79-6,  
 Brenzcatechin 159661-40-2 159661-41-3 159661-42-4 159661-43-5  
 159661-45-7, 1,8-Bis-(2,5-diaminophenoxy)-3,6-dioxaoctane 211872-02-5  
 220118-56-9 313219-61-3 346593-13-3, 3-Amino-4-nitro-acenaphthene  
 346684-81-9 375856-52-3 503856-02-8 503856-16-4 503856-17-5  
 503856-18-6 506436-20-0 506436-21-1 506436-47-1

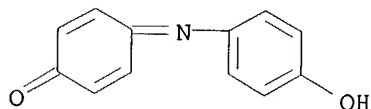
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (oxidative hair dyes containing aromatic dicarbonyl compds., other dyes and color intensifiers)

IT 500-85-6D, Indophenol, derivs.

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (oxidative hair dyes containing aromatic dicarbonyl compds., other dyes and color intensifiers)

RN 500-85-6 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX NAME)



L84 ANSWER 8 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:278303 HCAPLUS

DN 138:308930

TI Oxidative hair dyes containing quaternary heterocycles

IN Gross, Wibke; Oberkobusch, Doris; Mueller, Helmut; Hoeffkes, Horst;  
 Moeller, Hinrich

PA Henkel K.-G.a.A., Germany

SO Ger. Offen., 24 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10148844	A1	20030410	DE 2001-10148844	20011004
	WO 2003030847	A1	20030417	WO 2002-EP10736	20020925
	W: AU, BR, CA, CN, HU, JP, NO, PL, RU, US, VN				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR				
	EP 1432388	A1	20040630	EP 2002-772344	20020925
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR, BG, CZ, EE, SK				
PRAI	DE 2001-10148844	A	20011004		
	WO 2002-EP10736	W	20020925		
OS	MARPAT 138:308930				

AB The invention concerns oxidative hair dyes that contain quaternary heterocycles and CH-acidic compds.; other group of compds. can be added that are selected from aromatic or heteroarom. aldehydes or ketones, aminoacids, oligopeptides composed of 2-9 amino acids, primary or secondary aromatic amines, nitrogen-containing heterocycles and hydroxyl compds.

Thus in a dyeing experiment the 4-chloro-1-ethylquinolinium tetrafluoroborate and 1,2,3,3-tetramethylindolium iodide were mixed at pH 9 and red color was obtained.

- IC ICM A61K007-13
- CC 62-3 (Essential Oils and Cosmetics)
- ST oxidative hair dye quaternary heterocycle
- IT Proteins
  - RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
  - (almond; oxidative hair dyes containing quaternary heterocycles)
- IT Amines, biological studies
  - Nitriles, biological studies
  - RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
  - (aromatic; oxidative hair dyes containing quaternary heterocycles)
- IT Hair preparations
  - (dyes, oxidative; oxidative hair dyes containing quaternary heterocycles)
- IT Carbonyl compounds (organic), biological studies
  - RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
  - (heterocyclic; oxidative hair dyes containing quaternary heterocycles)
- IT Peptides, biological studies
  - RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
  - (oligopeptides; oxidative hair dyes containing quaternary heterocycles)
- IT Aldehydes, biological studies
  - Carbonates, biological studies
  - Caseins, biological studies
  - Collagens, biological studies
  - Elastins
  - Halides
  - Keratins
  - Ketones, biological studies
  - Lysins
  - Quaternary ammonium compounds, biological studies
  - Salts, biological studies
  - Sulfates, biological studies
  - RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
  - (oxidative hair dyes containing quaternary heterocycles)
- IT Heterocyclic compounds
  - RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
  - (quaternary; oxidative hair dyes containing quaternary heterocycles)
- IT Proteins
  - RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
  - (soybean; oxidative hair dyes containing quaternary heterocycles)
- IT Glutens
  - RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
  - (wheat gluten; oxidative hair dyes containing quaternary heterocycles)
- IT 50-21-5D, Lactic acid, salts 56-41-7, L-Alanine, biological studies
  - 59-48-3, Oxindol 59-92-7, DOPA, biological studies 60-18-4,
  - L-Tyrosine, biological studies 60-32-2 62-53-3, Aniline, biological
  - studies 63-91-2, L-Phenylalanine, biological studies 64-18-6D, Formic
  - acid, salts 64-19-7D, Acetic acid, salts 65-49-6, 4-Aminosalicylic
  - acid 66-72-8, Pyridoxal 67-52-7, Barbituric acid 70-26-8,
  - L-Ornithine 70-70-2 71-00-1, L-Histidine, biological studies
  - 73-22-3, L-Tryptophane, biological studies 74-79-3, L-Arginine,
  - biological studies 75-75-2D, Methanesulfonic acid, salts with quaternary
  - heterocycles 79-09-4D, Propionic acid, salts 79-14-1D, Glycolic acid,
  - salts 83-07-8, 3H-Pyrazol-3-one, 4-amino-1,2-dihydro-1,5-dimethyl-2-
  - phenyl- 83-30-7, 2,4,6-Trihydroxybenzoic acid 83-33-0, Indan-1-one
  - 83-33-0D, Indanone, derivs. 83-56-7, 1,5-Dihydroxynaphthalene
  - 84-65-1D, Anthraquinone, derivs. 84-83-3, 2-Formylmethylene-1,3,3-
  - trimethylindoline 87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid

87-66-1, Pyrogallol 88-21-1, 2-Aminobenzene sulfonic acid 88-74-4,  
 2-Nitroaniline 89-25-8, 1-Phenyl-3-methylpyrazol-5-one 89-57-6,  
 5-Aminosalicylic acid 89-84-9 89-86-1, 2,4-Dihydroxybenzoic acid  
 90-02-8, biological studies 90-05-1, 2-Methoxyphenol 90-15-3,  
 1-Naphthol 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid  
 90-44-8, Anthrone 91-29-2, 4'-Amino-4-nitrodiphenylamine-2-sulfonic acid  
 91-56-5D, Isatin, N-(2-Hydroxyalkyl), N-Allyl- derivs. 91-95-2,  
 3,3',4,4'-Tetraaminodiphenyl 92-44-4, 2,3-Dihydroxynaphthalene 93-05-0  
 93-55-0, Propiophenone 95-01-2, 2,4-Dihydroxybenzaldehyde 95-54-5,  
 o-Phenylenediamine, biological studies 95-55-6, 2-Aminophenol 95-70-5,  
 2,5-Diaminotoluol 95-88-5, 4-Chlororesorcin 96-91-3, Picramic acid  
 96-93-5 97-51-8, 2-Hydroxy-5-nitrobenzaldehyde 98-01-1, Furfural,  
 biological studies 98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid  
 98-79-3, Pyrrolidone-5-carboxylic acid 98-86-2, Acetophenone, biological  
 studies 99-05-8, 3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol  
 99-31-0, 5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic acid  
 99-56-9, 1,2-Diamino-4-nitrobenzene 99-61-6, 3-Nitrobenzaldehyde  
 99-92-3 99-93-4, 4-Hydroxyacetophenone 99-98-9 100-01-6,  
 4-Nitroaniline, biological studies 100-10-7, 4-Dimethylaminobenzaldehyde  
 101-54-2, N-Phenyl-1,4-phenylenediamine 101-77-9, 4,4'-  
 Diaminodiphenylmethane 101-80-4, 4,4'-Diaminodiphenyl ether 102-32-9,  
 3,4-Dihydroxy-phenylacetic acid 106-50-3, p-Phenylenediamine, biological  
 studies 107-92-6D, Butanoic acid, salts 108-45-2, m-Phenylenediamine,  
 biological studies 108-46-3, Resorcin, biological studies 108-72-5,  
 1,3,5-Triaminobenzene 108-73-6, Phloroglucine 109-00-2,  
 3-Hydroxypyridine 110-85-0, Piperazine, biological studies 110-86-1,  
 Pyridine, biological studies 110-89-4, Piperidine, biological studies  
 116-63-2, 4-Amino-3-hydroxynaphthalene-1-sulfonic acid 117-39-5,  
 Quercetin 118-12-7 118-70-7, 4,5,6-Triaminopyrimidine 118-92-3,  
 2-Aminobenzoic acid 118-93-4 119-34-6, 4-Amino-2-nitrophenol  
 119-59-5, 4,4'-Diaminodiphenylsulfoxide 119-61-9, Benzophenone,  
 biological studies 119-70-0, 4,4'-Diaminodiphenylamine-2-sulfonic acid  
 120-21-8, 4-Diethylaminobenzaldehyde 120-46-7, 2-Benzoylacetophenone  
 120-72-9, Indole, biological studies 120-72-9D, Indole, derivs.  
 120-80-9, Pyrocatechol, biological studies 121-33-5, Vanillin  
 121-47-1, 3-Aminobenzene sulfonic acid 121-57-3, 4-Aminobenzene sulfonic  
 acid 121-71-1 123-30-8, 4-Aminophenol 123-31-9, Hydroquinone,  
 biological studies 123-75-1, Pyrrolidine, biological studies 126-81-8,  
 5,5-Dimethylcyclohexane-1,3-dione 131-56-6, 2,4-Dihydroxybenzophenone  
 139-65-1, 4,4'-Diaminodiphenylsulfide 141-84-4, Rhodanine 141-86-6,  
 2,6-Diaminopyridine 142-08-5, 2-Hydroxypyridine 142-62-1D, Capronic  
 acid, salts 147-85-3, L-Proline, biological studies 149-91-7, Gallic  
 acid, biological studies 150-13-0, 4-Aminobenzoic acid 150-19-6,  
 3-Methoxyphenol 150-75-4, 4-Methylaminophenol 150-76-5,  
 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine 288-13-1, Pyrazole  
 288-32-4, Imidazole, biological studies 288-88-0, 1H-1,2,4-Triazole  
 326-91-0, 2-Thenoyltrifluoro-acetone 350-03-8, 3-Acetylpyridine  
 366-18-7, 2,2'-Bipyridine 452-58-4, 2,3-Diaminopyridine 458-36-6,  
 4-Hydroxy-3-methoxymintaldehyde 480-66-0 486-25-9, 9-Fluorenone  
 487-48-9, Salicyl 487-89-8, 1H-Indole-3-carboxaldehyde 488-87-9,  
 2,5-Dimethylresorcin 490-78-8 491-38-3, Chromone 491-67-8,  
 5,6,7-Trihydroxyflavone 492-94-4, 2,2'-Furil 492-97-7,  
 2,2'-Bithiophene 496-73-1, 4-Methylresorcin 498-02-2 498-94-2,  
 Piperidine-4-carboxylic acid 498-95-3, Piperidine-3-carboxylic acid  
 500-22-1, 3-Pyridinaldehyde 500-85-6D, Indophenol, derivs.  
 504-15-4 504-17-6, Thiobarbituric acid 504-24-5, 4-Aminopyridine  
 520-36-5, 4',5,7-Trihydroxyflavone 523-88-6, 5,5'-Dibromosalicyl  
 525-82-6, Flavone 528-21-2 528-75-6, 2,4-Dinitrobenzaldehyde  
 533-31-3, 1,3-Benzodioxol-5-ol 533-73-3, Hydroxyhydroquinone 535-75-1,

Piperidine-2-carboxylic acid 535-87-5, 3,5-Diaminobenzoic acid  
 537-65-5, 4,4'-Diaminodiphenylamine 548-83-4, 3,5,7-Trihydroxyflavone  
 552-89-6, 2-Nitrobenzaldehyde 553-26-4, 4,4'-Bipyridine 553-86-6,  
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 6-Nitro-o-toluidine 574-19-6 577-56-0 577-85-5, 3-Hydroxyflavone  
 578-66-5, 8-Aminoquinoline 579-07-7 580-17-6, 3-Aminoquinoline  
 580-22-3, 2-Aminoquinoline 582-17-2, 2,7-Dihydroxynaphthalene 586-89-0  
 591-27-5, 3-Aminophenol 603-81-6, 2,3-Diaminobenzoic acid 605-59-4,  
 1-Ethyl-4-methylquinoliniumiodide 606-23-5, Indan-1,3-dione 606-31-5,  
 2,6-Dinitrobenzaldehyde 606-55-3, 1-Ethyl-2-methylquinoliniumiodide  
 606-57-5, 2-Amino-1-nitronaphthalene 608-08-2, 3-Indoxylacetate  
 608-25-3, 2-Methylresorcin 608-97-9, Benzenepentamine 609-20-1  
 610-74-2, 2,5-Diaminobenzoic acid 610-81-1, 4-Amino-3-nitrophenol  
 610-99-1 611-03-0, 2,4-Diaminobenzoic acid 611-09-6, 5-Nitroisatin  
 611-98-3, 4,4'-Diaminobenzophenone 611-99-4, 4,4'-Dihydroxybenzophenone  
 614-16-4, Benzoylacetonitrile 615-66-7 615-71-4, 1,2,4-Triaminobenzene  
 616-45-5, Pyrrolidone 616-47-7, 1-Methylimidazole 619-05-6,  
 3,4-Diaminobenzoic acid 621-96-5, 4,4'-Diaminostilbene 623-30-3,  
 3-(2-Furyl)acrolein 626-64-2, 4-Hydroxypyridine 636-25-9,  
 2,5,-Diaminophenol 698-63-5, 5-Nitrofurfural, biological studies  
 699-83-2 703-80-0, 3-Acetylinole 704-13-2, 3-Hydroxy-4-  
 nitrobenzaldehyde 711-79-5 712-61-8 712-97-0, 6-Nitropiperonal  
 779-90-8, 1,3,5-Triacetylbenzene 832-58-6, 2,4,6-Trimethoxyacetophenone  
 873-74-5, 4-Aminobenzonitrile 876-87-9, 1,2-Dimethylquinolinium-iodide  
 932-16-1, 1-Methyl-2-acetylpyrrole 934-22-5, 5-Aminobenzimidazol e  
 950-81-2 1004-74-6, 2,4,5,6-Tetraaminopyrimidine 1004-75-7,  
 4-Hydroxy-2,5,6-triaminopyrimidine 1009-61-6, 1,4-Diacetylbenzene  
 1080-74-6 1121-60-4, 2-Pyridinecarboxaldehyde 1122-54-9,  
 4-Acetylpyridine 1122-62-9, 2-Acetylpyridine 1123-55-3,  
 7-Aminobenzothiazole 1123-93-9, 5-Aminobenzothiazole 1125-60-6,  
 5-Aminoiso quinoline 1136-86-3 1137-42-4, 4-Hydroxybenzophenone  
 1143-38-0, 1,8-Dihydroxyanthrone 1143-72-2, 2,3,4-Trihydroxybenzophenone  
 1192-58-1 1197-55-3, 4-Aminophenylacetic acid 1199-59-3,  
 4-Dimethylamino-2-methylbenzaldehyde 1204-86-0 1217-89-6,  
 N-Benzylisatin 1226-42-2, Anisil 1424-66-4 1450-75-5 1455-77-2,  
 3,5-Diamino-1,2,4-triazole 1466-88-2

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(oxidative hair dyes containing quaternary heterocycles)

IT 1470-79-7, 2,4,4'-Trihydroxybenzophenone 1483-97-2, 3,6-Diacetyl-9-  
 ethylcarbazole 1484-05-5, 3-Acetyl-9-methylcarbazole 1504-76-3  
 1571-72-8, 3-Amino-4-hydroxybenzoic acid 1734-79-8 1820-80-0,  
 3-Aminopyrazole 1874-22-2, 3-(5-Nitro-2-furyl)acrolein 2058-74-4,  
 N-Methylisatin 2124-31-4 2154-56-5, Benzyl 2291-40-9 2374-03-0,  
 4-Amino-3-hydroxybenzoic acid 2431-00-7, 4-Methyl-benzil 2460-59-5,  
 3,5-Dinitrosalicylaldehyde 2478-38-8 2654-52-6 2785-06-0,  
 2,3-Dimethylbenzothiazoliumiodide 2835-77-0, 2-Aminobenzophenone  
 2835-95-2, 2-Methyl-5-aminophenol 2835-98-5 2835-99-6,  
 4-Amino-3-methylphenol 2871-01-4, HC Red 3 2887-61-8,  
 2-Hydroxybutyrophenone 3011-34-5, 4-Hydroxy-3-nitrobenzaldehyde  
 3119-93-5, 3-Ethyl-2-methylbenzothiazoliumiodide 3131-52-0,  
 5,6-Dihydroxyindole 3158-63-2, 1,3-Dimethylthiobarbituric acid  
 3167-49-5, 6-Aminonicotinic acid 3204-61-3, 1,2,4,5-Tetraaminobenzene  
 3215-37-0, 3-Acetylcarbazole 3240-72-0, 2,4-Dihydroxy-5,6-  
 diaminopyrimidine 3342-78-7, 2-Aminophenylacetic acid 3433-54-3  
 3457-46-3, 4,4'-Dichloro-benzil 3457-48-5, 4,4'-Dimethyl-benzil  
 3457-55-4 3468-11-9, 1,3-Diiminoisoindoline 3565-42-2, Quinisatin  
 3674-33-7, 2-Nitro-1,3-indandione 3769-62-8, Gallion 4181-05-9,  
 4-Diphenylaminobenzaldehyde 4318-76-7, 2,5-Diaminopyridine 4329-86-6D,  
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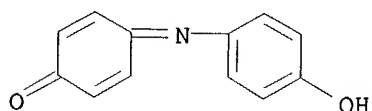
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 4-Quinolinecarboxaldehyde 4444-26-2, Hexaaminobenzene 4928-43-2,  
 2-Dimethylamino-5-aminopyridine 4940-39-0, Chromone-2-carboxylic acid  
 5007-67-0, 3,3',4,4'-Tetraaminobenzophenone 5099-39-8,  
 2-[2-(Diethylamino)ethylamino]-5-nitroaniline 5131-58-8 5192-03-0,  
 5-Aminoindole 5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole  
 5217-47-0, 1,3-Diethylthiobarbituric acid 5260-37-7,  
 3-Ethyl-2-methylbenzoxazoliumiodide 5274-70-4, 2-Hydroxy-3-  
 nitrobenzaldehyde 5307-02-8, 2,5-Diaminoanisole 5307-14-2,  
 1,4-Diamino-2-nitrobenzene 5318-27-4, 6-Aminoindole 5345-47-1,  
 2-Aminonicotinic acid 5416-80-8 5418-63-3, 1,2,3,3-Tetramethylindolium  
 iodide 5432-53-1 5434-20-8, 3-Aminophthalic acid 5466-88-6,  
 2H-1,4-Benzoxazin-3(4H)-one 5551-11-1, 4-Chloro-2-nitrobenzaldehyde  
 5650-41-9, 3-Hydroxypropiophenone 5718-83-2, Rhodanine-3-acetic acid  
 5850-35-1, Acid blue 29 5959-52-4, 3-Amino-2-naphthoic acid 6093-67-0  
 6093-68-1 6201-65-6, 2-Chlororesorcin 6203-18-5 6247-27-4, Mordant  
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 6271-44-9, 1,2,3-Trimethylquinoxaliniumiodide 6322-56-1,  
 4-Hydroxy-3-nitroacetophenone 6358-09-4, 2-Amino-6-chloro-4-nitrophenol  
 6361-22-4, 2-Chloro-6-nitrobenzaldehyde 6399-72-0,  
 6-Amino-7-hydroxynaphthalene-2-sulfonic acid 6628-04-2,  
 4-Aminoquinoline 6628-86-0, 5-Chloro-2-nitrobenzaldehyde 6633-46-1  
 6634-82-8, 4-Amino-4'-nitrostilbene-2,2'-disulfonic acid disodium salt  
 6635-20-7, 5-Nitrovanillin 6781-42-6, 1,3-Diacetylbenzene 6967-12-0,  
 6-Aminoindazole 7218-02-2 7313-70-4, 5-Sulfoisatin 7332-96-9  
 7336-20-1 7429-90-5D, Aluminum, salts 7439-89-6D, Iron, salts  
 7439-93-2D, Lithium, salts 7439-95-4D, Magnesium, salts 7439-96-5D,  
 Manganese, salts 7440-09-7D, Potassium, salts 7440-23-5D, Sodium,  
 salts 7440-24-6D, Strontium, salts 7440-39-3D, Barium, salts  
 7440-48-4D, Cobalt, salts 7440-50-8D, Copper, salts 7440-66-6D, Zinc,  
 salts 7440-70-2D, Calcium, salts 7570-45-8 7575-35-1 7664-38-2D,  
 Phosphoric acid, salts 7749-47-5, 2-Amino-4-methoxy-6-methylpyrimidine  
 7768-28-7, 2-(2-Hydroxyethyl)phenol 7770-45-8 10040-98-9,  
 4-(1-Imidazolyl)benzaldehyde 10041-06-2 10111-08-7,  
 1H-Imidazole-2-carboxaldehyde 10173-66-7 10182-90-8D,  
 2-Formyl-1-methylpyridinium, salts 10338-57-5, 4-Piperidinobenzaldehyde  
 10342-85-5 13066-97-2 13129-67-4 13129-68-5 13129-69-6,  
 N-Piperidinomethylisatin 13167-95-8 13441-40-2D, salts 13505-39-0,  
 3-Hydroxybutyrophenone 13598-36-2D, Phosphonic acid, salts 13669-42-6,  
 3-Quinolinecarboxaldehyde 13754-19-3, 4,5-Diaminopyrimidine  
 14268-66-7, 1,3-Benzodioxol-5-amine 14338-36-4, 3-Aminophenylacetic acid  
 14501-66-7 14798-03-9D, Ammonium, salts 14874-70-5D,  
 Tetrafluoroborate, salts with quaternary heterocycles 14933-76-7,  
 3-Ethyl-2-methylbenzothiazolium-p-toluene sulfonate 15028-10-1  
 15032-10-7 15201-05-5D, Tetrachlorozincate(2-), salts with quaternary  
 heterocycles 16082-33-0, 3,5-Diaminopyrazole 16214-27-0,  
 Indan-1,2-dione 16588-34-4, 4-Chloro-3-nitrobenzaldehyde 16634-88-1,  
 5-Bromo-3-nitrosalicylaldehyde 16722-51-3D, p-Toluenesulfonate, salts  
 with quaternary heterocycles 16859-86-2, 1,4-Dimethylquinolinium-iodide  
 16867-03-1, 2-Amino-3-hydroxypyridine 16887-00-6D, Chloride, salts with  
 quaternary heterocycles 16919-18-9D, Hexafluorophosphate, salts with  
 quaternary heterocycles 17028-61-4, 2-Hydroxy-3-methoxy-5-  
 nitrobenzaldehyde 17078-27-2, 4,4'-Bisdimethylamino-benzil 17422-74-1,  
 Chromone-3-aldehyde 17630-76-1, 5-Chloroisatin 17672-22-9 18073-18-2  
 18899-16-6D, salts 19005-93-7, 1H-Indole-2-carboxaldehyde 19012-02-3,  
 1-Methyl-3-acetylindole 19012-03-4 19298-14-7 19335-11-6,  
 5-Aminoindazole 20048-92-4, 1-Ethyl-2-methylquinolinium-p-toluene  
 sulfonate 20103-09-7 20357-25-9, 4,5-Dimethoxy-2-nitrobenzaldehyde  
 20432-35-3 20461-54-5D, Iodide, salts with quaternary heterocycles

21240-56-2 22525-43-5 22711-20-2, 4-Dimethylamino-benzil 22711-21-3,  
 4-Methoxy-benzil 22711-23-5, 4-Chloro-benzil 22715-34-0,  
 2-Hydroxy-4,5,6-triaminopyrimidine 22948-94-3 23244-87-3,  
 2,4,5-Triaminopyridine 23894-07-7 24905-87-1, HC Red 7 24959-67-9D,  
 Bromide, salts with quaternary heterocycles 25128-32-9 26216-16-0  
 27394-81-6, 5-(4-Methoxyphenyl)penta-2,4-dienal 27841-29-8,  
 1,2,3-Benzenetriol, 4,6-diamino- 28020-38-4, 2,3-Diamino-6-  
 methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline 29705-39-3  
 31541-32-9 31680-07-6, 4-Methyl-3-nitrobenzaldehyde 31835-64-0,  
 3-Amino-3'-nitrobiphenyl 31905-57-4, Nitrophenylene diamine  
 32479-73-5, 1,3-Diethylbarbituric acid 33288-79-8, 4,4'-Dihydroxy-benzil  
 33709-29-4 33985-71-6 35578-47-3, 4,4'-Dibromo-benzil 36075-79-3D,  
 salts 36429-85-3 36518-76-0 37181-39-8D, Trifluoromethylsulfonate,  
 salts with quaternary heterocycles 37705-82-1, 2,4-Diaminobenzonitrile  
 38469-73-7, 4-Hydroxy-benzil 39755-03-8, 4-Hydroxybutyrophenone  
 39755-95-8, 5-Methoxyisatin 39910-98-0 40101-17-5,  
 3,3'-Dimethoxy-benzil 41602-56-6, 4-Dimethylamino-2-hydroxybenzaldehyde  
 41704-95-4, Isatin-4-carboxylic acid 41946-53-6 42454-06-8,  
 5-Hydroxy-2-nitrobenzaldehyde 42758-54-3, 4-Nitro-1-naphthaldehyde  
 43061-74-1D, salts of 43093-74-9D, Nitroaminophenol, derivs.  
 45528-84-5D, 2-Chloro-1-methylpyridinium, salts of 45791-64-8D,  
 4-Acetyl-1-methylpyridinium, salts 45999-34-6D, salts of 46061-36-3D,  
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 50610-28-1 50818-84-3D, 3-Ethylbenzothiazolium-2-sulfonate, salts with  
 quaternary heterocycles 50899-59-7, N-Hydroxymethylisatin 51387-92-9  
 51980-54-2 52605-12-6, 3,4,5,3',4',5'-Hexamethoxybenzil 52725-10-7D,  
 salts of 52943-88-1, 1-Phenyl-3-methyl-4,5-diaminopyrazole 53003-19-3  
 53003-20-6 53055-05-3, 3-Methoxy-2-nitrobenzaldehyde 54263-79-5  
 54628-24-9D, salts 55047-63-7 55302-96-0, 2-Methyl-5-(2-  
 hydroxyethylamino)phenol 55949-38-7D, Hydroxypyrimidine, derivs.  
 55952-56-2, 1-Ethyl-4-methylquinolinium-p-toluenesulfonate 56159-70-7,  
 3,4-Dimethoxy-2'-Chloro-benzil  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (oxidative hair dyes containing quaternary heterocycles)  
 IT 56932-44-6, HC Yellow 5 58028-76-5, 2-Morpholinobenzaldehyde  
 58480-17-4 58979-56-9 59184-59-7 60126-36-5, 3-Ethyl-2-  
 methylbenzoxazolium-p-toluene sulfonate 61224-35-9 61693-42-3,  
 3-Amino-2,4-dichlorophenol 62077-85-4D, salts 62378-72-7 62496-02-0,  
 2-Methylamino-4,5,6-triaminopyrimidine 63149-33-7 63212-52-2D, salts  
 of 63969-46-0, Bis(5-amino-2-hydroxyphenyl)methane 64258-84-0  
 64993-07-3, 5-Amino-6-nitrobenzo-1,3-dioxole 66566-48-1 66635-40-3,  
 4,4'-Diaminostilbene dihydrochloride 67608-58-6, 4-Amino-2-  
 hydroxybenzonitrile 67608-59-7 68391-32-2 68549-78-0 69537-53-7D,  
 salts 69564-74-5 69825-83-8, 6-Nitro-2,5-diaminopyridine 70484-29-6  
 70643-19-5, 2,4-Diaminophenoxyethanol 71134-97-9 73264-13-8D, salts  
 74991-01-8D, salts 75722-39-3D, salts 77484-77-6, 3-Amino-6-  
 methylamino-2-nitropyridine 77523-60-5D, salts 78521-11-6D, salts  
 79352-72-0, 2-Aminomethyl-4-aminophenol 80030-92-8 81892-72-0,  
 1,3-Bis(2,4-diaminophenoxy)propane 82576-75-8, HC Violet 1 83073-86-3  
 83763-47-7, 2-Amino-4-(2-hydroxyethylamino)anisole 84540-47-6,  
 2,6-Dihydroxy-3,4-dimethylpyridine 84540-50-1, 3-Amino-2-chloro-6-  
 methylphenol 84562-48-1, 4-Dimethylamino-2-methoxybenzaldehyde  
 84677-32-7 85561-52-0, 1-Phenyl-4,5-diaminopyrazole 85679-78-3,  
 2,6-Dimethoxy-3,5-diaminopyridine 85926-99-4, 4-Hydroxyindoline  
 87538-42-9, 2,4-Dihydroxy-benzil 88851-29-0 90134-10-4,  
 4-(Dibutylamino)benzaldehyde 90335-90-3 90395-44-1 90817-34-8  
 91921-13-0D, salts 93841-24-8, 2-(2,5-Diaminophenyl)ethanol 93923-57-0  
 95576-89-9, HC Red 10 96516-29-9, 2-Fluoro-3-nitrobenzaldehyde

97095-30-2 101403-71-8 103025-33-8, 1(4H)-Pyridinecarboxaldehyde  
 104333-09-7, 2-Hydroxymethyl-4-aminophenol 104903-49-3 106110-60-5  
 110102-86-8, 2-Methyl-5-amino-4-chlorophenol 110952-46-0 114260-09-2  
 114402-54-9, 1,3-Bis(4-aminophenylamino)propane 115423-85-3  
 115423-86-4, 1,3-Diamino-2,4-dimethoxybenzene 115571-79-4 117907-43-4  
 122438-74-8D, salts 122455-85-0, 5-Amino-4-fluoro-2-methylphenol  
 126335-41-9 126335-43-1, 2-(2,5-Diaminophenoxy)ethanol 128729-30-6,  
 1,3-Bis[N-(4-aminophenyl)-2-hydroxyethylamino]-2-propanol 129697-50-3  
 130582-56-8, 1,3-Bis(4-aminophenylamino)-2-propanol 133437-59-9  
 137103-78-7 137290-78-9, 5-Amino-4-methoxy-2-methylphenol 137290-86-9,  
 5-(2-Hydroxyethylamino)-4-methoxy-2-methylphenol 141614-04-2  
 141614-05-3 141922-20-5, 2,4-Diamino-5-fluorotoluene 145092-00-8,  
 3-Amino-5-hydroxypyrazole 146658-65-3, 5-(3-Hydroxypropylamino)-2-  
 methylphenol 147025-37-4D, salts 147801-94-3 147801-97-6  
 149330-25-6 149833-00-1D, salts 155601-17-5, 1-(2-Hydroxyethyl)-4,5-  
 diaminopyrazole 159661-40-2 159661-41-3 159661-42-4,  
 2,5-Dihydroxy-4-morpholinoaniline 159661-43-5 159661-45-7,  
 1,8-Bis(2,5-diaminophenoxy)-3,6-dioxaoctane 169381-72-0 187030-52-0,  
 5-(4-Diethylaminophenyl)penta-2,4-dienal 209120-51-4 211872-02-5  
 215377-39-2 215377-40-5 215377-41-6 215377-42-7 215377-43-8  
 215377-44-9 215377-45-0 215377-46-1 215377-47-2 215377-48-3  
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 1,2,3,3-Tetramethyl-3H-indoliummethanesulfonate 223384-47-2  
 223397-50-0D, salts 223397-52-2 223397-66-8D, salts 223397-83-9D,  
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 260980-99-2 260981-00-8 278807-62-8D, salts 278807-63-9D, salts  
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 278807-67-3D, salts 278807-68-4D, salts 278807-69-5D, salts  
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 503855-11-6D, salts 503855-32-1 503855-35-4 503855-38-7  
 503855-42-3 503855-44-5 503855-47-8 503855-48-9 503855-49-0  
 503855-50-3 503855-51-4 503855-52-5 503855-53-6 503855-54-7  
 503855-55-8 503856-02-8 503856-16-4 503856-17-5

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (oxidative hair dyes containing quaternary heterocycles)

IT 503856-18-6  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (oxidative hair dyes containing quaternary heterocycles)  
 IT 500-85-6D, Indophenol, derivs.  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (oxidative hair dyes containing quaternary heterocycles)  
 RN 500-85-6 HCAPLUS  
 CN 2,5-Cyclohexadien-1-one, 4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX NAME)



L84 ANSWER 9 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2003:278301 HCAPLUS  
 DN 138:292386  
 TI Hair dyes containing aromatic or heteroaromatic aldehydes and ketones in combination with 1-acylindoline-3-one derivatives, other dyes and color intensifiers  
 IN Moeller, Hinrich; Oberkobusch, Doris  
 PA Henkel K.-G.a.A., Germany  
 SO Ger. Offen., 22 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10148841	A1	20030410	DE 2001-10148841	20011004
	WO 2003030842	A1	20030417	WO 2002-EP10734	20020925
	W: AU, BR, CA, CN, HU, JP, NO, PL, RU, US, VN				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR				
	EP 1432428	A1	20040630	EP 2002-774646	20020925
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR, BG, CZ, EE, SK				
PRAI	DE 2001-10148841	A	20011004		
	WO 2002-EP10734	W	20020925		

OS MARPAT 138:292386  
 AB The invention concerns hair dyes that contain aromatic or heteroarom. aldehydes and ketones, 1-acylindoline-3-one derivs., other dyes and color intensifiers. The components are selected from the group of primary and secondary aromatic amines, hydroxydes, nitrogen-containing heterocycles, amino acids etc. Thus in a dyeing experiment 5 mmol 4-formyl-1-methylquinolinium-p-toluene sulfonate and 5 mmol 1-acetylindoline-3-one were mixed and pH 6 was set; an intensive red-violet color was obtained.  
 IC ICM A61K007-13  
 CC 62-3 (Essential Oils and Cosmetics)  
 ST hair dye arom heteroarom aldehyde ketone acylindoline one  
 IT Proteins  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (almond; hair dyes containing aromatic or heteroarom. aldehydes and ketones in combination with 1-acylindoline-3-one derivs., other dyes and color



intensifiers)  
IT Surfactants  
(anionic; hair dyes containing aromatic or heteroarom. aldehydes and ketones in combination with 1-acylindoline-3-one derivs., other dyes and color intensifiers)  
IT Aldehydes, biological studies  
Ketones, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(aromatic; hair dyes containing aromatic or heteroarom. aldehydes and ketones in combination with 1-acylindoline-3-one derivs., other dyes and color intensifiers)  
IT Dyes  
in (direct; hair dyes containing aromatic or heteroarom. aldehydes and ketones in combination with 1-acylindoline-3-one derivs., other dyes and color intensifiers)  
IT Hair preparations  
(dyes, oxidative; hair dyes containing aromatic or heteroarom. aldehydes and ketones in combination with 1-acylindoline-3-one derivs., other dyes and color intensifiers)  
IT Hair preparations  
(dyes; hair dyes containing aromatic or heteroarom. aldehydes and ketones in combination with 1-acylindoline-3-one derivs., other dyes and color intensifiers)  
IT Oxidizing agents  
(hair dyes containing aromatic or heteroarom. aldehydes and ketones in combination with 1-acylindoline-3-one derivs., other dyes and color intensifiers)  
IT Aldehydes, biological studies  
Amines, biological studies  
Carbonyl compounds (organic), biological studies  
Caseins, biological studies  
Collagens, biological studies  
Collagens, biological studies  
Elastins  
Elastins  
Glutens  
Keratins  
Ketones, biological studies  
Quaternary ammonium compounds, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(hair dyes containing aromatic or heteroarom. aldehydes and ketones in combination with 1-acylindoline-3-one derivs., other dyes and color intensifiers)  
IT Ketones, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(heteroarom.; hair dyes containing aromatic or heteroarom. aldehydes and ketones in combination with 1-acylindoline-3-one derivs., other dyes and color intensifiers)  
IT Aldehydes, biological studies  
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(heteroaryl; hair dyes containing aromatic or heteroarom. aldehydes and ketones in combination with 1-acylindoline-3-one derivs., other dyes and color intensifiers)  
IT Surfactants  
ketones (nonionic; hair dyes containing aromatic or heteroarom. aldehydes and ketones in combination with 1-acylindoline-3-one derivs., other dyes and color

- intensifiers)
- IT Peptides, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (oligopeptides; hair dyes containing aromatic or heteroarom. aldehydes and ketones in combination with 1-acylindoline-3-one derivs., other dyes and color intensifiers)
- IT Proteins  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (soybean; hair dyes containing aromatic or heteroarom. aldehydes and ketones in combination with 1-acylindoline-3-one derivs., other dyes and color intensifiers)
- IT Surfactants  
 (zwitterionic; hair dyes containing aromatic or heteroarom. aldehydes and ketones in combination with 1-acylindoline-3-one derivs., other dyes and color intensifiers)
- IT 51-92-3D, Tetramethylammonium, salts 59-48-3 59-92-7, biological studies 60-18-4, L-Tyrosine, biological studies 60-32-2 62-53-3, Benzenamine, biological studies 63-91-2, L-Phenylalanine, biological studies 65-49-6 66-40-0D, Tetraethylammonium, salts 66-72-8 67-52-7, 2,4,6(1H,3H,5H)-Pyrimidinetrione 70-18-8, Glutathion, biological studies 70-26-8, L-Ornithine 70-70-2 71-00-1, L-Histidine, biological studies 71-47-6D, Formate, derivs. 71-50-1D, Acetate, salts 72-03-7D, Propionate, salts 73-22-3, L-Tryptophan, biological studies 74-79-3, L-Arginine, biological studies 83-07-8 83-30-7 83-33-0 83-56-7, 1,5-Naphthalenediol 84-83-3 87-02-5 87-66-1, 1,2,3-Benzenetriol 88-21-1 88-74-4 89-57-6 89-84-9 89-86-1 90-02-8, biological studies 90-05-1 90-15-3, 1-Naphthalenol 90-20-0 90-44-8, 9(10H)-Anthracenone 91-29-2 91-56-5, 1H-Indole-2,3-dione 91-95-2, [1,1'-Biphenyl]-3,3',4,4'-tetramine 92-44-4, 2,3-Naphthalenediol 93-05-0 93-55-0 95-01-2 95-54-5, 1,2-Benzenediamine, biological studies 95-55-6 95-70-5 95-88-5 96-91-3 96-93-5 97-51-8 98-01-1, 2-Furancarboxaldehyde, biological studies 98-37-3 98-86-2, biological studies 99-05-8 99-07-0 99-31-0 99-50-3 99-56-9 99-61-6 99-92-3 99-93-4 99-98-9 100-01-6, biological studies 100-10-7 101-54-2 101-77-9 101-80-4 102-32-9 106-50-3, 1,4-Benzenediamine, biological studies 107-95-9, .β.-Alanine 108-45-2, 1,3-Benzenediamine, biological studies 108-46-3, 1,3-Benzenediol, biological studies 108-72-5, 1,3,5-Benzenetriamine 108-73-6, 1,3,5-Benzenetriol 113-21-3D, Lactate, salts 116-63-2 117-39-5 118-12-7 118-70-7, 4,5,6-Pyrimidinetriamine 118-92-3 118-93-4 119-34-6 119-59-5 119-61-9, biological studies 119-70-0 120-21-8 120-46-7 120-72-9, 1H-Indole, biological studies 120-72-9D, 1H-Indole, derivs. 120-80-9, 1,2-Benzenediol, biological studies 121-33-5 121-47-1 121-57-3 121-71-1 123-30-8 123-31-9, 1,4-Benzenediol, biological studies 126-44-3D, Citrate, salts 131-56-6 134-81-6, Benzil 139-65-1 141-84-4 141-86-6, 2,6-Pyridinediamine 142-62-1D, Hexanoic acid, salts 147-85-3, L-Proline, biological studies 149-91-7, biological studies 150-13-0 150-19-6 150-75-4 150-76-5 156-81-0, 2,4-Pyrimidinediamine 288-88-0, 1H-1,2,4-Triazole 326-91-0 350-03-8 366-18-7, 2,2'-Bipyridine 452-58-4, 2,3-Pyridinediamine 458-36-6 461-55-2D, Butyrate, salts 462-08-8, 3-Pyridinamine 480-66-0 486-25-9, 9H-Fluoren-9-one 487-48-9 487-89-8, 1H-Indole-3-carboxaldehyde 488-87-9 490-78-8 491-38-3, 4H-1-Benzopyran-4-one 491-67-8 492-94-4 492-97-7, 2,2'-Bithiophene 496-73-1 498-02-2 500-22-1, 3-Pyridinecarboxaldehyde 500-85-6D, Indophenol, derivs. 504-15-4 504-17-6 504-24-5, 4-Pyridinamine 504-29-0, 2-Pyridinamine 520-36-5 523-88-6 525-82-6 528-21-2 528-75-6 533-31-3, 1,3-Benzodioxol-5-ol 533-73-3, 1,2,4-Benzenetriol 535-87-5

537-65-5 548-83-4 552-89-6 553-26-4, 4,4'-Bipyridine 553-86-6,  
 2(3H)-Benzofuranone 555-16-8, biological studies 570-24-1 574-19-6  
 577-56-0 577-85-5 578-66-5, 8-Quinolinamine 579-07-7 580-17-6,  
 3-Quinolinamine 580-22-3, 2-Quinolinamine 582-17-2,  
 2,7-Naphthalenediol 586-89-0 591-27-5 603-81-6 606-23-5,  
 1H-Indene-1,3(2H)-dione 606-31-5 606-57-5 608-08-2 608-25-3  
 608-59-3D, Gluconate, salts 608-97-9, Benzenepentamine 609-20-1  
 610-74-2 610-81-1 610-99-1 611-03-0 611-09-6 611-98-3 611-99-4  
 614-16-4 615-66-7 615-71-4, 1,2,4-Benzenetriamine 619-05-6  
 621-96-5 623-30-3 636-25-9 698-63-5, biological studies 699-83-2  
 703-80-0 704-13-2 711-79-5 712-61-8 712-97-0 779-90-8 832-58-6  
 873-74-5 876-87-9 932-16-1 934-22-5, 1H-Benzimidazol-5-amine  
 950-81-2 1004-74-6, Pyrimidinetetramine 1004-75-7 1009-61-6  
 1080-74-6 1121-60-4, 2-Pyridinecarboxaldehyde 1122-54-9 1122-62-9  
 1123-55-3, 7-Benzothiazolamine 1123-93-9, 5-Benzothiazolamine  
 1125-60-6, 5-Isoquinolinamine 1136-86-3 1137-42-4 1143-38-0  
 1143-72-2 1192-58-1 1197-55-3 1199-59-3 1204-86-0 1217-89-6  
 1226-42-2 1424-66-4 1450-75-5 1455-77-2, 1H-1,2,4-Triazole-3,5-  
 diamine 1466-88-2 1470-79-7 1483-97-2 1484-05-5 1504-76-3  
 1571-72-8 1734-79-8 1820-80-0, 1H-Pyrazol-3-amine 1874-22-2  
 2058-74-4 2124-31-4 2291-40-9 2374-03-0 2431-00-7 2460-59-5  
 2478-38-8

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(hair dyes containing aromatic or heteroarom. aldehydes and ketones  
 in combination with 1-acylindoline-3-one derivs., other dyes and color  
 intensifiers)

IT 2654-52-6 2785-06-0 2835-77-0 2835-95-2 2835-98-5 2835-99-6  
 2871-01-4 2887-61-8 3011-34-5 3131-52-0, 1H-Indole-5,6-diol  
 3158-63-2 3167-49-5 3204-61-3, 1,2,4,5-Benzenetetramine 3215-37-0  
 3240-72-0 3342-78-7 3433-54-3 3457-46-3 3457-48-5 3457-55-4  
 3468-11-9 3565-42-2, 2,3,4(1H)-Quinolinetrione 3674-33-7 3715-17-1D,  
 Tartrate, salts 3769-62-8 3812-32-6D, Carbonate, salts 4181-05-9  
 4318-76-7, 2,5-Pyridinediamine 4331-29-7, 1H-Benzimidazol-4-amine  
 4363-93-3, 4-Quinolinecarboxaldehyde 4444-26-2, Benzenehexamine  
 4928-43-2 4940-39-0 5007-67-0 5099-39-8 5131-58-8 5192-03-0,  
 1H-Indol-5-amine 5192-04-1, 1H-Indol-7-amine 5192-23-4,  
 1H-Indol-4-amine 5217-47-0 5274-70-4 5307-02-8 5307-14-2  
 5318-27-4, 1H-Indol-6-amine 5345-47-1 5416-80-8 5432-53-1  
 5434-20-8 5551-11-1 5650-41-9 5718-83-2 5850-35-1 5959-52-4  
 6093-67-0 6093-68-1 6201-65-6 6203-18-5 6247-27-4 6259-50-3  
 6322-56-1 6358-09-4 6361-22-4 6399-72-0 6628-04-2 6628-86-0  
 6633-46-1 6634-82-8 6635-20-7 6781-42-6 6967-12-0,  
 1H-Indazol-6-amine 7218-02-2 7313-70-4 7332-96-9 7336-20-1  
 7429-90-5D, Aluminium, salts 7429-92-7D, Einsteinium, salts  
 7439-93-2D, Lithium, salts 7439-95-4D, Magnesium, salts 7439-96-5D,  
 Manganese, salts 7440-23-5D, Sodium, salts 7440-24-6D, Strontium,  
 salts 7440-31-5D, Tin, salts 7440-39-3D, Barium, salts 7440-48-4D,  
 Cobalt, salts 7440-50-8D, Copper, salts 7440-66-6D, Zinc, salts  
 7440-70-2D, Calcium, salts 7570-45-8 7575-35-1 7722-84-1, Hydrogen  
 peroxide, biological studies 7749-47-5 7768-28-7 7770-45-8  
 10023-74-2D, Valerate, salts 10040-98-9 10041-06-2 10111-08-7,  
 1H-Imidazole-2-carboxaldehyde 10173-66-7 10182-90-8D, salts  
 10338-57-5 10342-85-5 10549-76-5D, Tetrabutylammonium, salts  
 13010-31-6D, Tetrapropylammonium, salts 13066-97-2 13129-67-4  
 13129-68-5 13129-69-6 13167-95-8 13441-40-2D, salts 13505-39-0  
 13669-42-6, 3-Quinolinecarboxaldehyde 13754-19-3, 4,5-Pyrimidinediamine  
 14265-44-2D, Phosphate, salts 14268-66-7, 1,3-Benzodioxol-5-amine  
 14338-36-4 14501-66-7 14800-24-9D, Benzyltrimethylammonium, salts  
 14808-79-8D, Sulfate, salts 15028-10-1 15032-10-7 16082-33-0,

1H-Pyrazole-3,5-diamine 16214-27-0, 1H-Indene-1,2(3H)-dione 16588-34-4  
 16634-88-1 16800-67-2 16800-67-2D, salts 16800-68-3 16859-86-2  
 16867-03-1 17028-61-4 17078-27-2 17422-74-1 17630-76-1  
 17672-22-9 18073-18-2 18899-16-6D, salts 19005-93-7,  
 1H-Indole-2-carboxaldehyde 19012-02-3 19012-03-4 19298-14-7  
 19335-11-6, 1H-Indazol-5-amine 20103-09-7 20357-25-9 20432-35-3  
 21240-56-2 22525-43-5 22711-20-2 22711-21-3 22711-23-5  
 22715-34-0 22948-94-3 23244-87-3, 2,4,5-Pyridinetriamine 23894-07-7  
 24905-87-1 25128-32-9 26216-16-0 27394-81-6 27841-29-8  
 28020-38-4 29539-03-5 29705-39-3 31541-32-9 31680-07-6  
 31835-64-0 31905-57-4D, Nitrophenylenediamine, derivs. 32479-73-5  
 33288-79-8 33709-29-4 33985-71-6 35578-47-3 36075-79-3D, salts  
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 39755-95-8 39910-98-0 40101-17-5 41602-56-6 41704-95-4  
 41946-53-6 42454-06-8 42758-54-3 43093-74-9D, Nitroaminophenol,  
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 46881-39-4D, salts 46893-92-9D, salts 50610-28-1 50899-59-7  
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 55302-96-0 55949-38-7, Pyrimidinol 56159-70-7 56932-44-6  
 57122-18-6D, Glycolate, salts 58028-76-5 58480-17-4 58979-56-9  
 59184-59-7 61224-35-9 61693-42-3 62077-85-4D, salts 62378-72-7  
 62486-02-6 62486-03-7 62486-04-8 62496-02-0 63149-33-7  
 63969-46-0 64258-84-0 64993-07-3 66566-48-1 66635-40-3  
 67608-58-6 67608-59-7 68391-32-2 68549-78-0 69537-53-7D, salts  
 69564-74-5 69825-83-8 70484-29-6 70643-19-5 71134-97-9  
 71177-91-8 73264-13-8D, salts 74991-01-8D, salts  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (hair dyes containing aromatic or heteroarom. aldehydes and ketones in  
 combination with 1-acylindoline-3-one derivs., other dyes and color  
 intensifiers)  
 IT 75722-39-3D, salts 77484-77-6 77523-60-5D, salts 78521-11-6D, salts  
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 84677-32-7 85561-52-0 85679-78-3 85926-99-4 87538-42-9  
 90134-10-4 90335-90-3 90395-44-1 90817-34-8 91921-13-0D, salts  
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 119532-73-9 122438-74-8D, salts 126335-41-9 126335-43-1  
 128729-30-6 129697-50-3 130582-56-8 133437-59-9 137103-78-7  
 137290-78-9 137290-86-9 141614-04-2 141614-05-3 145092-00-8  
 146658-65-3 147025-37-4D, salts 147801-94-3 147801-97-6  
 149330-25-6 149833-00-1D, salts 155601-17-5 159661-40-2  
 159661-41-3 159661-42-4 159661-43-5 159661-45-7 169381-72-0  
 187030-52-0 209120-51-4 211872-02-5 215377-39-2 215377-40-5  
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 215377-51-8 220118-56-9 223384-47-2 223397-50-0D, salts  
 223397-66-8D, salts 223397-83-9D, salts 223397-92-0D, salts  
 223398-02-5 223398-35-4D, salts 223398-44-5D, salts 260980-91-4  
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 278807-73-1D, salts 278807-74-2D, salts 278807-75-3D, salts  
 278807-76-4D, salts 278807-77-5D, salts 278807-78-6D, salts

278807-79-7D, salts 278807-80-0D, salts 279214-38-9 279218-88-1D, salts 279218-90-5D, salts 279218-92-7D, salts 279218-94-9D, salts 279218-98-3D, salts 279219-00-0D, salts 279219-03-3D, salts 279219-07-7D, salts 279219-13-5D, salts 279219-17-9D, salts 279219-21-5D, salts 279219-24-8D, salts 279219-31-7D, salts 279219-33-9D, salts 324757-53-1D, salts 324757-56-4D, salts 324757-57-5D, salts 324757-59-7D, salts 324757-60-0D, salts 325958-39-2D, salts 325958-40-5D, salts 325958-41-6D, salts 325958-42-7D, salts 325958-43-8D, salts 325958-44-9D, salts 343218-85-9 346593-13-3 375856-52-3 503853-76-7 503853-94-9 503853-97-2 503854-00-0 503854-04-4 503854-05-5 503854-06-6 503854-25-9D, salts 503854-51-1D, salts 503854-53-3D, salts 503854-79-3D, salts 503854-80-6D, salts 503854-83-9D, salts 503854-84-0D, salts 503854-85-1D, salts 503854-87-3D, salts 503854-88-4D, salts 503854-89-5D, salts 503854-90-8D, salts 503854-91-9D, salts 503854-92-0D, salts 503854-93-1D, salts 503854-95-3D, salts 503854-98-6D, salts 503855-00-3D, salts 503855-01-4D, salts 503855-03-6D, salts 503855-05-8D, salts 503855-07-0D, salts 503855-09-2D, salts 503855-11-6D, salts 503855-32-1 503855-35-4 503855-38-7 503855-42-3 503855-44-5 503855-47-8 503855-48-9 503855-49-0 503855-50-3 503855-51-4 503855-53-6 503855-54-7 503855-55-8 503856-02-8 503856-16-4 506430-28-0 506430-29-1 506430-30-4 506430-31-5

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(hair dyes containing aromatic or heteroarom. aldehydes and ketones in combination with 1-acylindoline-3-one derivs., other dyes and color intensifiers)

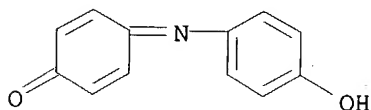
IT 500-85-6D, Indophenol, derivs.

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(hair dyes containing aromatic or heteroarom. aldehydes and ketones in combination with 1-acylindoline-3-one derivs., other dyes and color intensifiers)

RN 500-85-6 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX NAME)



L84 ANSWER 10 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:714119 HCAPLUS

DN 137:252663

TI Hair dyeing compositions comprising a ring-fused heterocycle direct dyes

IN Pratt, Dominic; Kawagishi, Toshio

PA Kao Corporation, Japan; Fuji Photo Film Co., Ltd.

SO Eur. Pat. Appl., 28 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	EP 1240892	A2	20020918	EP 2002-5386	20020315
	EP 1240892	A3	20040128		

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

DE 10112436	A1	20021002	DE 2001-10112436	20010315
DE 10112436	C2	20030821		
DE 10114545	A1	20021219	DE 2001-10114545	20010324
EP 1275367	A1	20030115	EP 2001-117774	20010801
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2003024059	A1	20030206	US 2002-96669	20020314
US 6783558	B2	20040831		
JP 2003113055	A2	20030418	JP 2002-72373	20020315
EP 1398020	A1	20040317	EP 2002-20528	20020916
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
EP 1398022	A1	20040317	EP 2003-20523	20030916
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004107343	A2	20040408	JP 2003-322462	20030916
PRAI DE 2001-10112436	A	20010315		
DE 2001-10114545	A	20010324		
JP 2001-231327	A	20010731		
EP 2001-117774	A	20010801		
EP 2001-115750	A	20010709		
EP 2002-20528	A	20020916		

OS MARPAT 137:252663

AB The present invention is directed to a hair coloring method by using a composition and to the composition comprising a specified ring-fused heterocycle

direct dye (e.g., a pyrazolotriazole). This composition has a surprisingly good hair coloring performance and compatibility with peroxides. The use of this composition leads to long lasting brilliant colors, wherein the color is stable against washing of the hair and environmental influences. 3-Methyl-6-phenyl-1 H-pyrazolo[5,1-c][1,2,4]triazole (0.5g) was dissolved in water and allowed to react with 4-amino-2,6-dichlorophenol in the presence of potassium persulfate to give a pyrazolotriazole direct dye. A formulation contained the above dye 0.01, benzyl alc. 0.5 ammonia up to pH 10, and water up to 10 g. The composition imparted a bright vivid magenta color to white goat hair.

IC ICM A61K007-13

CC 62-3 (Essential Oils and Cosmetics)

Section cross-reference(s): 28

ST hair dye direct pyrazolotriazole prepn; ring fused heterocycle direct dye hair prepn

IT Dyes

(direct; hair dyeing compns. comprising ring-fused heterocycle direct dyes)

IT Hair preparations

(dyes, oxidative; hair dyeing compns. comprising ring-fused heterocycle direct dyes)

IT Hair preparations

(dyes; hair dyeing compns. comprising ring-fused heterocycle direct dyes)

IT Hair

Human

(hair dyeing compns. comprising ring-fused heterocycle direct dyes)

IT 163921-17-3 459425-56-0 460988-77-6  
460988-78-7 460988-79-8 460988-80-1  
460988-81-2 460988-82-3 460988-83-4  
460988-84-5

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(hair dyeing compns. comprising ring-fused heterocycle direct dyes)

IT 448235-46-9P 448235-48-1P 460988-76-5P

RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(hair dyeing compns. comprising ring-fused heterocycle direct dyes)

IT 5930-28-9 66348-57-0 101948-27-0 448235-49-2

RL: RCT (Reactant); RACT (Reactant or reagent)

(hair dyeing compns. comprising ring-fused heterocycle direct dyes)

IT 163921-17-3 459425-56-0 460988-77-6

460988-78-7 460988-79-8 460988-80-1

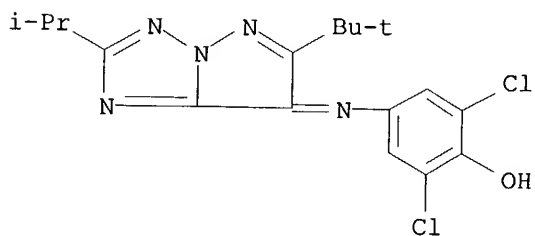
460988-81-2 460988-82-3 460988-83-4

460988-84-5

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(hair dyeing compns. comprising ring-fused heterocycle direct dyes)

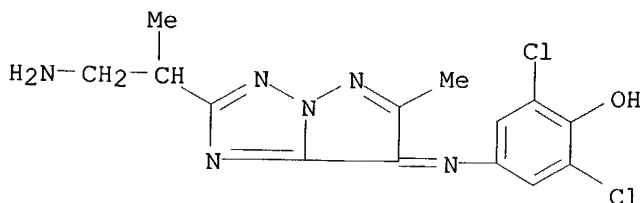
RN 163921-17-3 HCAPLUS

CN Phenol, 2,6-dichloro-4-[[6-(1,1-dimethylethyl)-2-(1-methylethyl)-7H-pyrazolo[1,5-b][1,2,4]triazol-7-ylidene]amino]- (9CI) (CA INDEX NAME)



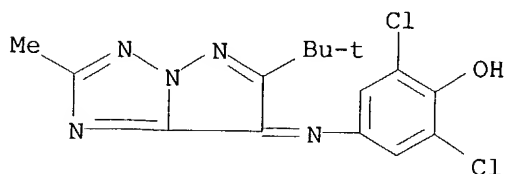
RN 459425-56-0 HCAPLUS

CN Phenol, 4-[[2-(2-amino-1-methylethyl)-6-methyl-7H-pyrazolo[1,5-b][1,2,4]triazol-7-ylidene]amino]-2,6-dichloro- (9CI) (CA INDEX NAME)



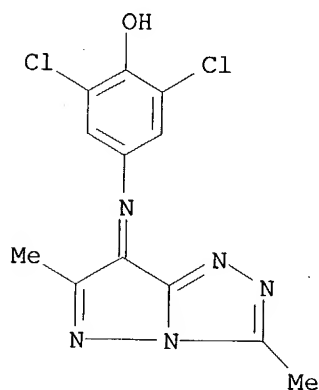
RN 460988-77-6 HCAPLUS

CN Phenol, 2,6-dichloro-4-[[6-(1,1-dimethylethyl)-2-methyl-7H-pyrazolo[1,5-b][1,2,4]triazol-7-ylidene]amino]- (9CI) (CA INDEX NAME)



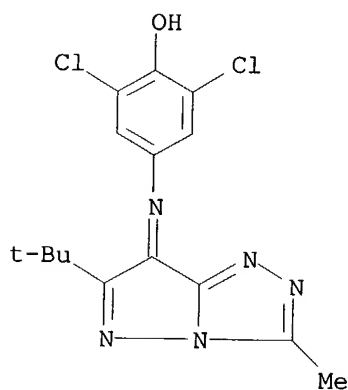
RN 460988-78-7 HCAPLUS

CN Phenol, 2,6-dichloro-4-[(3,6-dimethyl-7H-pyrazolo[5,1-c]-1,2,4-triazol-7-ylidene)amino]- (9CI) (CA INDEX NAME)



RN 460988-79-8 HCAPLUS

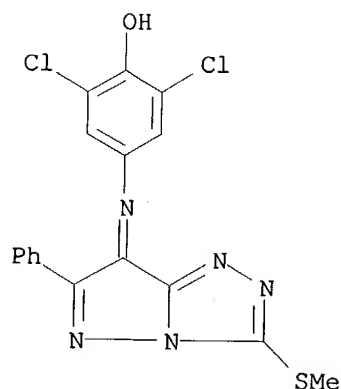
CN Phenol, 2,6-dichloro-4-[[6-(1,1-dimethylethyl)-3-methyl-7H-pyrazolo[5,1-c]-1,2,4-triazol-7-ylidene]amino]- (9CI) (CA INDEX NAME)



RN 460988-80-1 HCAPLUS

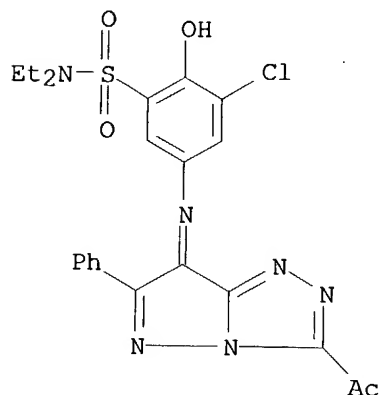
CN Phenol, 2,6-dichloro-4-[[3-(methylthio)-6-phenyl-7H-pyrazolo[5,1-c]-1,2,4-triazol-7-ylidene]amino]- (9CI) (CA INDEX NAME)





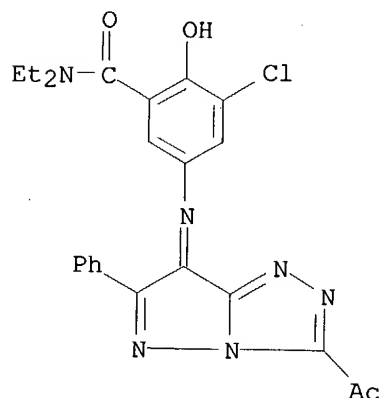
RN 460988-81-2 HCAPLUS

CN Benzenesulfonamide, 5-[(3-acetyl-6-phenyl-7H-pyrazolo[5,1-c]-1,2,4-triazol-7-ylidene)amino]-3-chloro-N,N-diethyl-2-hydroxy- (9CI) (CA INDEX NAME)



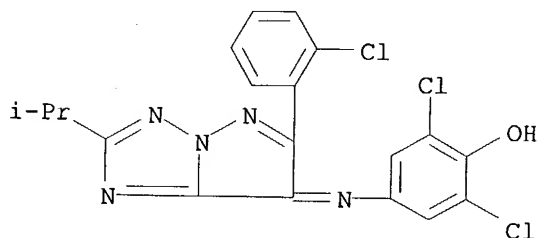
RN 460988-82-3 HCAPLUS

CN Benamide, 5-[(3-acetyl-6-phenyl-7H-pyrazolo[5,1-c]-1,2,4-triazol-7-ylidene)amino]-3-chloro-N,N-diethyl-2-hydroxy- (9CI) (CA INDEX NAME)



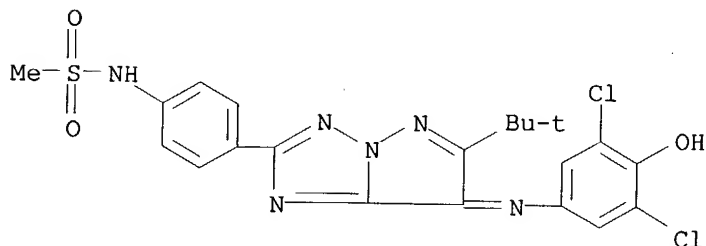
RN 460988-83-4 HCAPLUS

CN Phenol, 2,6-dichloro-4-[[6-(2-chlorophenyl)-2-(1-methylethyl)-7H-pyrazolo[1,5-b][1,2,4]triazol-7-ylidene]amino]- (9CI) (CA INDEX NAME)



RN 460988-84-5 HCAPLUS

CN Methanesulfonamide, N-[4-[7-[(3,5-dichloro-4-hydroxyphenyl)imino]-6-(1,1-dimethylethyl)-7H-pyrazolo[1,5-b][1,2,4]triazol-2-yl]phenyl]- (9CI) (CA INDEX NAME)



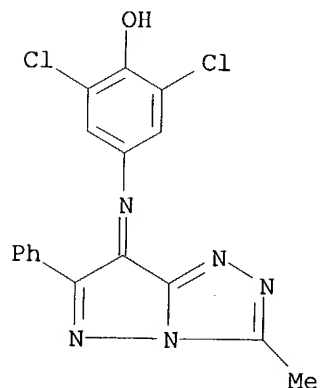
IT 448235-46-9P 448235-48-1P 460988-76-5P

RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(hair dyeing compns. comprising ring-fused heterocycle direct dyes)

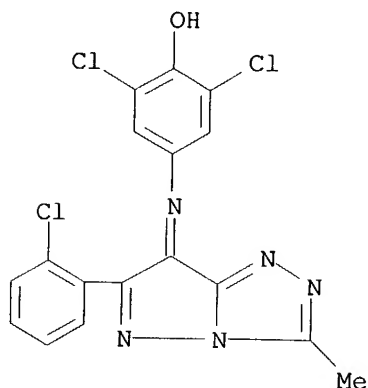
RN 448235-46-9 HCAPLUS

CN Phenol, 2,6-dichloro-4-[(3-methyl-6-phenyl-7H-pyrazolo[5,1-c]-1,2,4-triazol-7-ylidene)amino]- (9CI) (CA INDEX NAME)



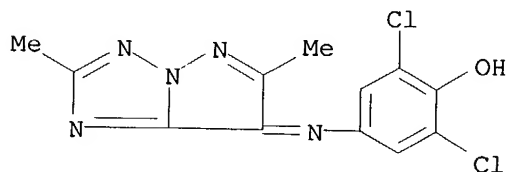
RN 448235-48-1 HCAPLUS

CN Phenol, 2,6-dichloro-4-[[6-(2-chlorophenyl)-3-methyl-7H-pyrazolo[5,1-c]-1,2,4-triazol-7-ylidene]amino]- (9CI) (CA INDEX NAME)



RN 460988-76-5 HCAPLUS

CN Phenol, 2,6-dichloro-4-[(2,6-dimethyl-7H-pyrazolo[1,5-b][1,2,4]triazol-7-ylidene)amino]- (9CI) (CA INDEX NAME)



L84 ANSWER 11 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:714118 HCAPLUS

DN 137:237397

TI Compositions for the dyeing of human hair

IN Pratt, Dominic

PA Kao Corporation, Japan

SO Eur. Pat. Appl., 10 pp.

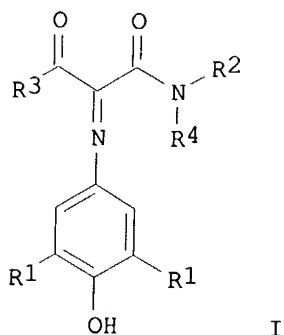
CODEN: EPXXDW

DT Patent

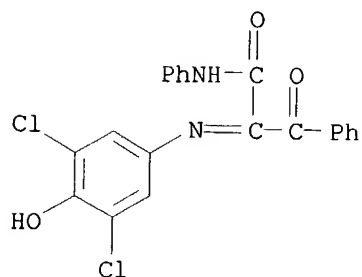
LA English

FAN.CNT 1

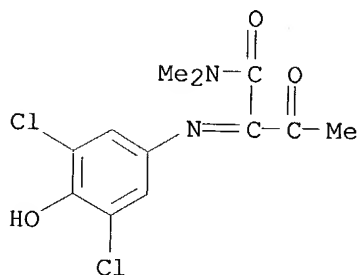
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1240891	A2	20020918	EP 2002-5385	20020315
	EP 1240891	A3	20030129		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	DE 10112437	A1	20021002	DE 2001-10112437	20010315
	DE 10112437	C2	20030821		
	US 2003019052	A1	20030130	US 2002-95917	20020313
	US 6733541	B2	20040511		
	JP 2002275040	A2	20020925	JP 2002-71712	20020315
PRAI	DE 2001-10112437	A	20010315		
OS	MARPAT 137:237397				
GI					



- AB A composition for the dyeing of human hair comprises at least 1 direct-acting hair dye (I, where R1 = halo, R2 and R4 = OH- or NH2-substituted C1-4 alkyl or Ph and R3 = H, or OH- or NH2-substituted C1-4 alkyl or Ph). Thus, benzoylacetanilide was allowed to react with 4-amino-2,6-dichlorophenol in the presence of K2S2O8 to give  $\alpha$ -[(3,5-dichloro-4-hydroxyphenyl)imino]- $\beta$ -oxo-N-phenylbenzenepropanamide. A formulation was prepared by dissolving 0.1 g of the above dye in 0.5 EtOH and mixing this solution with a mixture of 0.5 g benzyl alc. and 9 g water. A strand of undamaged, white goat hair was immersed in this solution for 20 min and after the coloration process, the strand was washed with a shampoo and dried.
- IC ICM A61K007-13
- CC 62-3 (Essential Oils and Cosmetics)
- ST hair dye phenylpropanamide dichlorohydroxyphenyliminooxophenyl prepn
- IT Hair  
Human  
(compns. for dyeing of human hair)
- IT Hair preparations  
(dyes, oxidative; compns. for dyeing of human hair)
- IT Hair preparations  
(dyes; compns. for dyeing of human hair)
- IT **448218-46-0P 448218-47-1P**  
RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(compns. for dyeing of human hair)
- IT 959-66-0 2044-64-6, N,N-Dimethylacetoacetamide 5930-28-9,  
4-Amino-2,6-dichlorophenol  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(compns. for dyeing of human hair)
- IT **448218-46-0P 448218-47-1P**  
RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(compns. for dyeing of human hair)
- RN 448218-46-0 HCAPLUS
- CN Benzenepropanamide,  $\alpha$ -[(3,5-dichloro-4-hydroxyphenyl)imino]- $\beta$ -oxo-N-phenyl- (9CI) (CA INDEX NAME)

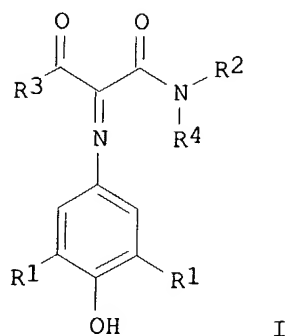


RN 448218-47-1 HCAPLUS  
 CN Butanamide, 2-[(3,5-dichloro-4-hydroxyphenyl)imino]-N,N-dimethyl-3-oxo-  
 (9CI) (CA INDEX NAME)

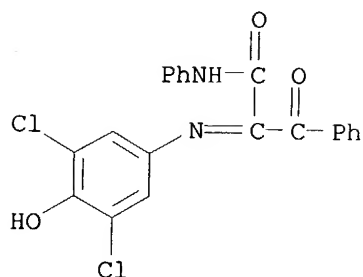


L84 ANSWER 12 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2002:634266 HCAPLUS  
 DN 137:190366  
 TI Hair dyes containing acetanilide derivatives of 4-amino-2,6-dichlorophenol  
 PA Goldwell G.m.b.H., Germany  
 SO Ger. Gebrauchsmusterschrift, 18 pp.  
 CODEN: GGXXFR  
 DT Patent  
 LA German  
 FAN.CNT 1

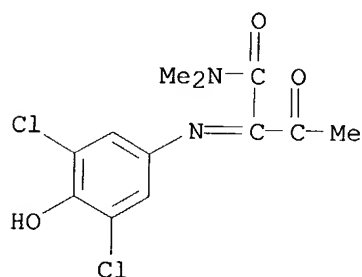
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 20104442	U1	20020822	DE 2001-20104442	20010315
PRAI	DE 2001-20104442		20010315		
OS	MARPAT 137:190366				
GI					



- AB The invention concerns the synthesis of acetanilide derivs. of 4-amino-2,6-dichlorophenol and their usage as direct hair dyes. Compds. of the general formula (I) are claimed; where R1 = halogen atom; R2 and R4 = optionally OH or NH2-substituted C1-C4-alkylgroup, Ph group; and R3 = H, OH or NH2-substituted C1-C4-alkylgroup, Ph group. The novel dyes excel higher permanency compared to other similar direct dyes. The hair dye compns. can also contain oxidative dyes.
- IC ICM A61K007-13
- CC 62-3 (Essential Oils and Cosmetics)  
Section cross-reference(s): 25
- ST direct hair dye acetanilide amino dichlorophenol deriv
- IT Dyes  
(direct; hair dyes containing acetanilide derivs. of 4-amino-2,6-dichlorophenol)
- IT Hair preparations  
(dyes, oxidative; hair dyes containing acetanilide derivs. of 4-amino-2,6-dichlorophenol)
- IT Hair preparations  
(dyes; hair dyes containing acetanilide derivs. of 4-amino-2,6-dichlorophenol)
- IT 7732-18-5, Water, properties  
RL: PRP (Properties)  
(casreact)
- IT **448218-46-0P 448218-47-1P**  
RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(hair dyes containing acetanilide derivs. of 4-amino-2,6-dichlorophenol)
- IT 959-66-0 2044-64-6, N,N-Dimethylacetoacetamide 5930-28-9, 4-Amino-2,6-dichlorophenol  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(hair dyes containing acetanilide derivs. of 4-amino-2,6-dichlorophenol)
- IT **448218-46-0P 448218-47-1P**  
RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(hair dyes containing acetanilide derivs. of 4-amino-2,6-dichlorophenol)
- RN 448218-46-0 HCAPLUS
- CN Benzenepropanamide,  $\alpha$ -[(3,5-dichloro-4-hydroxyphenyl)imino]- $\beta$ -oxo-N-phenyl- (9CI) (CA INDEX NAME)



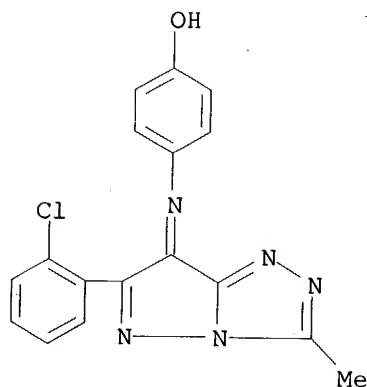
RN 448218-47-1 HCAPLUS  
 CN Butanamide, 2-[(3,5-dichloro-4-hydroxyphenyl)imino]-N,N-dimethyl-3-oxo-  
 (9CI) (CA INDEX NAME)



L84 ANSWER 13 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2002:634265 HCAPLUS  
 DN 137:174513  
 TI Hair dyes containing 6-methyl-3-phenyl-pyrazolotriazole derivatives  
 PA Goldwell G.m.b.H., Germany  
 SO Ger. Gebrauchsmusterschrift, 19 pp.  
 CODEN: GGXXFR  
 DT Patent  
 LA German  
 FAN.CNT 1

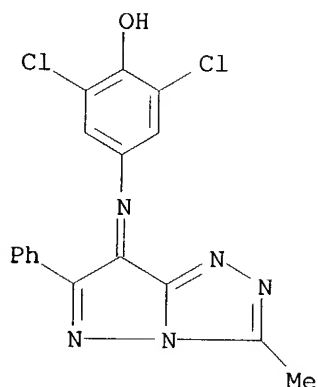
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 20104441	U1	20020822	DE 2001-20104441	20010315
PRAI	DE 2001-20104441		20010315		
OS	MARPAT 137:174513				
AB	The invention concerns the synthesis of 6-methyl-3-phenyl-pyrazolotriazole derivs. and their usage as direct dyes for hair. Compared with direct dyes of similar structure the novel dyes excel higher permanency. The dye compns. can contain oxidative dyes.				
IC	ICM A61K007-13				
CC	62-3 (Essential Oils and Cosmetics) Section cross-reference(s): 28				
ST	direct hair dye pyrazolotriazole deriv				
IT	Dyes (direct; hair dyes containing 6-Me-3-Ph-pyrazolotriazole derivs.)				
IT	Hair preparations (dyes, oxidative; hair dyes containing 6-Me-3-Ph-pyrazolotriazole derivs.)				
IT	Hair preparations				

(dyes; hair dyes containing 6-Me-3-Ph-pyrazolotriazole derivs.)  
 IT 7732-18-5, Water, properties  
 RL: PRP (Properties)  
 (casreact)  
 IT 448235-47-0  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (hair dyes containing 6-Me-3-Ph-pyrazolotriazole derivs.)  
 IT 448235-46-9P 448235-48-1P  
 RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (hair dyes containing 6-Me-3-Ph-pyrazolotriazole derivs.)  
 IT 5930-28-9, 4-Amino-2,6-dichlorophenol 66348-57-0 448235-49-2  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hair dyes containing 6-Me-3-Ph-pyrazolotriazole derivs.)  
 IT 448235-47-0  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (hair dyes containing 6-Me-3-Ph-pyrazolotriazole derivs.)  
 RN 448235-47-0 HCAPLUS  
 CN Phenol, 4-[[6-(2-chlorophenyl)-3-methyl-7H-pyrazolo[5,1-c]-1,2,4-triazol-7-ylidene]amino]- (9CI) (CA INDEX NAME)



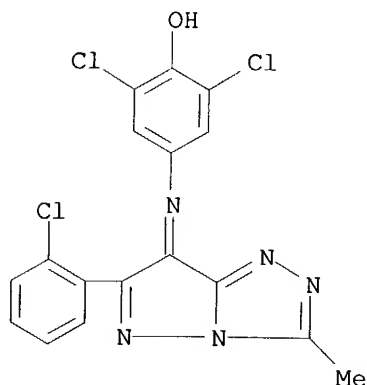
IT 448235-46-9P 448235-48-1P  
 RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (hair dyes containing 6-Me-3-Ph-pyrazolotriazole derivs.)  
 RN 448235-46-9 HCAPLUS  
 CN Phenol, 2,6-dichloro-4-[(3-methyl-6-phenyl-7H-pyrazolo[5,1-c]-1,2,4-triazol-7-ylidene)amino]- (9CI) (CA INDEX NAME)





RN 448235-48-1 HCAPLUS

CN Phenol, 2,6-dichloro-4-[[6-(2-chlorophenyl)-3-methyl-7H-pyrazolo[5,1-c]-1,2,4-triazol-7-ylidene]amino]- (9CI) (CA INDEX NAME)



L84 ANSWER 14 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:278381 HCAPLUS

DN 137:116820

TI Photochemical and thermal modifications of permanent hair dyes

AU Motz-Schalck, Laurence; Lemaire, Jacques

CS Laboratoire de Photochimie Moléculaire et Macromoléculaire, Université Blaise Pascal, UMR CNRS 6505, Aubière, F-63177, Fr.

SO Journal of Photochemistry and Photobiology, A: Chemistry (2002), 147(3), 225-231

CODEN: JPPCEJ; ISSN: 1010-6030

PB Elsevier Science B.V.

DT Journal

LA English

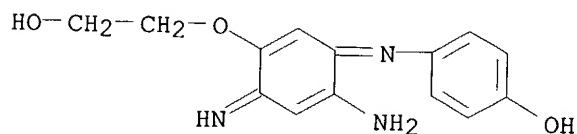
AB A study of the thermal and photochem. transformation of an oxidative hair dye is carried out in solution and on hair. The influence of irradiation wavelength, temperature, humidity and oxygen on the dye evolution is examined. Inhibition of the transformation by oxygen was noticed. In each dye aminoindamine and aminoindoaniline, two colorless transformation products are pointed out. In order to confirm the hypothesis of a reduction mechanism, indamine is irradiated in nitrogen bubbled isopropanol solution. The same

- photoproducts as on hair are found. Reverse phase liquid chromatog. coupled with pos. ionization mass spectroscopy allow to propose structures for the four transformation products.
- CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 62
- ST photochem thermal modification permanent oxidative hair dye
- IT UV and visible spectra  
(absorption; thermal and photochem. transformation of oxidative hair dye prepared by reaction of base and coupler in solution and on hair)
- IT Hair preparations  
(dyes; thermal and photochem. transformation of oxidative hair dye in solution and on hair as function of irradiation wavelength and temperature and humidity and oxygen)
- IT Hair  
Humidity  
Photolysis  
Thermal decomposition  
(thermal and photochem. transformation of oxidative hair dye in solution and on hair as function of irradiation wavelength and temperature and humidity and oxygen)
- IT Absorption spectra  
(thermal and photochem. transformation of oxidative hair dye prepared by reaction of base and coupler in solution and on hair)
- IT 106-50-3, p-Phenylenediamine, reactions 123-30-8, p-Aminophenol  
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
(base; thermal and photochem. transformation of oxidative hair dye prepared by reaction of base and coupler in solution and on hair)
- IT 70643-19-5, 2-Diamino-2,4-phenoxyethanol  
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
(coupler; thermal and photochem. transformation of oxidative hair dye prepared by reaction of base and coupler in solution and on hair)
- IT 443686-15-5P 443686-17-7P 443687-11-4P 443687-12-5P  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)  
(photoproduct; thermal and photochem. transformation of oxidative hair dye in solution and on hair as function of irradiation wavelength and temperature and humidity and oxygen)
- IT 443686-14-4 **443687-10-3**  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
(thermal and photochem. transformation of oxidative hair dye in solution and on hair as function of irradiation wavelength and temperature and humidity and oxygen)
- IT 7732-18-5, Water, properties 7782-44-7, Oxygen, properties  
RL: PRP (Properties)  
(thermal and photochem. transformation of oxidative hair dye in solution and on hair as function of irradiation wavelength and temperature and humidity and oxygen)
- IT **443687-10-3**  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
(thermal and photochem. transformation of oxidative hair dye

in solution and on **hair** as function of irradiation wavelength and temperature and humidity and oxygen)

RN 443687-10-3 HCAPLUS

CN Phenol, 4-[[2-amino-5-(2-hydroxyethoxy)-4-imino-2,5-cyclohexadien-1-ylidene]amino]- (9CI) (CA INDEX NAME)



RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L84 ANSWER 15 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:923231 HCAPLUS

DN 136:58497

TI Hair dyeing compositions containing oxocyclopentenones

IN Gross, Wibke; Hoeffkes, Horst; Martin, Hans-Dieter; Moeller, Hinrich; Oberkobusch, Doris

PA Henkel K.-G.a.A., Germany

SO Ger. Offen., 18 pp.

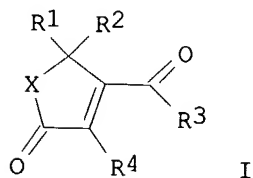
CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10029933	A1	20011220	DE 2000-10029933	20000617
	WO 2001097762	A1	20011227	WO 2001-EP6545	20010609
	W: AU, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	EP 1311231	A1	20030521	EP 2001-949394	20010609
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
PRAI	DE 2000-10029933	A	20000617		
	WO 2001-EP6545	W	20010609		
OS	MARPAT 136:58497				
GI					



AB Hair dyes contain oxocyclopentene derivative (I, R1 and R2 = H, or a C1-4 alkyl, R3 and R4 = H, C1-4 alkyl or group of aryls, the remainder of R1 and R2 and/or R3 and R4 can form a ring, and X = C:O, C:S or CH2). Thus, 2,5,5-trimethyl-3-oxocyclopent-1-enecarboxaldehyde (II) was prepared and used in a formulation consisting of II 8, Natrosol 250HR 2.0 and water to

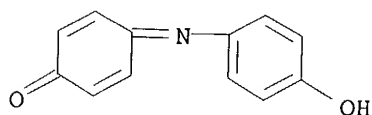
100 g.  
 IC ICM A61K007-13  
 CC 62-3 (Essential Oils and Cosmetics)  
 Section cross-reference(s): 23  
 ST oxacyclopentene hair dye prepn  
 IT Amines, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (aromatic, primary; hair dyeing compns. containing oxocyclopentenenes)  
 IT Amines, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (aryl, secondary; hair dyeing compns. containing oxocyclopentenenes)  
 IT Amines, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (diamines, aromatic; hair dyeing compns. containing oxocyclopentenenes)  
 IT Hair preparations  
 (dyes; hair dyeing compns. containing oxocyclopentenenes)  
 IT Shampoos  
 (hair dyeing compns. containing oxocyclopentenenes)  
 IT Amino acids, biological studies  
 Nitriles, biological studies  
 Phenols, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (hair dyeing compns. containing oxocyclopentenenes)  
 IT Caseins, biological studies  
 Collagens, biological studies  
 Elastins  
 Keratins  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (hydrolyzates; hair dyeing compns. containing oxocyclopentenenes)  
 IT Peptides, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (oligopeptides; hair dyeing compns. containing oxocyclopentenenes)  
 IT Protein hydrolyzates  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (soya; hair dyeing compns. containing oxocyclopentenenes)  
 IT Protein hydrolyzates  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (wheat gluten; hair dyeing compns. containing oxocyclopentenenes)  
 IT Glutens  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (wheat, hydrolyzates; hair dyeing compns. containing oxocyclopentenenes)  
 IT 56-87-1, L-Lysine, biological studies 59-48-3 59-92-7, biological  
 studies 60-18-4, L-Tyrosine, biological studies 62-53-3, Benzenamine,  
 biological studies 63-91-2, L-Phenylalanine, biological studies  
 65-49-6 67-52-7, 2,4,6(1H,3H,5H)-Pyrimidinetrione 70-18-8, biological  
 studies 70-26-8, L-Ornithine 71-00-1, L-Histidine, biological studies  
 73-22-3, L-Tryptophan, biological studies 74-79-3, L-Arginine,  
 biological studies 77-32-7 81-11-8 83-30-7 83-33-0 83-56-7,  
 1,5-Naphthalenediol 84-65-1, 9,10-Anthracenedione 84-65-1D,  
 Anthraquinone, derivs. 87-02-5 87-66-1, 1,2,3-Benzenetriol 88-21-1  
 88-74-4 89-57-6 89-86-1 90-05-1 90-15-3, 1-Naphthalenol 90-20-0  
 91-29-2 92-44-4, 2,3-Naphthalenediol 92-65-9 95-54-5,  
 1,2-Benzenediamine, biological studies 95-55-6 95-70-5 95-88-5  
 96-91-3 96-93-5 98-37-3 99-05-8 99-07-0 99-31-0 99-50-3  
 99-56-9 100-01-6, biological studies 101-77-9 101-80-4 102-32-9  
 106-50-3, 1,4-Benzenediamine, biological studies 107-95-9,  
 $\beta$ -Alanine 108-45-2, 1,3-Benzenediamine, biological studies  
 108-46-3, 1,3-Benzenediol, biological studies 108-72-5,  
 1,3,5-Benzenetriamine 108-73-6, 1,3,5-Benzenetriol 109-00-2,

3-Pyridinol 110-85-0, Piperazine, biological studies 110-86-1, Pyridine, biological studies 110-89-4, Piperidine, biological studies 116-63-2 118-12-7 118-70-7, 4,5,6-Pyrimidinetriamine 118-92-3 119-34-6 119-59-5 119-70-0 119-72-2 120-72-9, 1H-Indole, biological studies 120-80-9, 1,2-Benzenediol, biological studies 121-47-1 121-57-3 123-30-8 123-31-9, 1,4-Benzenediol, biological studies 123-75-1, Pyrrolidine, biological studies 139-65-1 141-84-4 141-86-6, 2,6-Pyridinediamine 142-08-5, 2(1H)-Pyridinone 147-85-3, L-Proline, biological studies 149-87-1 149-91-7, biological studies 150-13-0 150-19-6 150-75-4 150-76-5 156-81-0, 2,4-Pyrimidinediamine 288-13-1, 1H-Pyrazole 288-32-4, 1H-Imidazole, biological studies 288-88-0, 1H-1,2,4-Triazole 462-08-8, 3-Pyridinamine 480-66-0 488-87-9 496-73-1 498-94-2, 4-Piperidinecarboxylic acid 498-95-3, 3-Piperidinecarboxylic acid 500-85-6D, Indophenol, derivs. 504-15-4 504-17-6 504-24-5, 4-Pyridinamine 504-29-0, 2-Pyridinamine 517-22-6 533-31-3, 1,3-Benzodioxol-5-ol 533-73-3, 1,2,4-Benzenetriol 535-75-1, 2-Piperidinecarboxylic acid 535-87-5 537-65-5 553-86-6, 2(3H)-Benzofuranone 556-03-6, Tyrosine 570-24-1 578-66-5, 8-Quinolinamine 580-17-6, 3-Quinolinamine 580-22-3, 2-Quinolinamine 582-17-2, 2,7-Naphthalenediol 591-27-5 603-81-6 606-23-5, 1H-Indene-1,3(2H)-dione 606-55-3 606-57-5 608-08-2 608-25-3 610-74-2 610-81-1 611-03-0 611-98-3 614-82-4 615-66-7 615-71-4, 1,2,4-Benzenetriamine 616-45-5, 2-Pyrrolidinone 616-47-7 619-05-6 623-09-6 626-64-2, 4-Pyridinol 636-25-9 876-87-9 934-22-5, 1H-Benzimidazol-5-amine 1004-74-6, Pyrimidinetetramine 1004-75-7 1123-55-3, 7-Benzothiazolamine 1123-93-9, 5-Benzothiazolamine 1125-60-6, 5-Isoquinolinamine 1197-55-3 1455-77-2, 1H-1,2,4-Triazole-3,5-diamine 1571-72-8 1820-80-0, 1H-Pyrazol-3-amine 1953-54-4, 1H-Indol-5-ol 2374-03-0 2380-84-9, 1H-Indol-7-ol 2380-86-1, 1H-Indol-6-ol 2380-94-1, 1H-Indol-4-ol 2510-01-2 2654-52-6 2785-06-0 2835-98-5 2835-99-6 2871-01-4 3131-52-0, 1H-Indole-5,6-diol 3158-63-2 3167-49-5 3342-78-7 3855-78-5 4331-29-7, 1H-Benzimidazol-4-amine 4506-66-5 4928-43-2 5007-67-0 5099-39-8 5131-58-8 5192-03-0, 1H-Indol-5-amine 5192-04-1, 1H-Indol-7-amine 5192-23-4, 1H-Indol-4-amine 5217-47-0 5307-14-2 5318-27-4, 1H-Indol-6-amine 5345-47-1 5418-63-3 5434-20-8 5718-83-2 5850-35-1 5959-52-4 6201-65-6 6247-27-4 6259-50-3 6358-09-4 6399-72-0 6628-04-2 6634-82-8 6967-12-0, 1H-Indazol-6-amine 7336-20-1 7411-49-6 7575-35-1 7749-47-5 7768-28-7 10173-66-7 13754-19-3, 4,5-Pyrimidinediamine 14268-66-7, 1,3-Benzodioxol-5-amine 14338-36-4 16082-33-0, 1H-Pyrazole-3,5-diamine 16859-86-2 16867-03-1 19335-11-6, 1H-Indazol-5-amine 20103-09-7 22715-34-0 23244-87-3, 2,4,5-Pyridinetriamine 23894-07-7 24119-24-2 24905-87-1 28020-38-4 28491-52-3 29539-03-5 29705-39-3 31835-64-0 39267-74-8 41927-50-8 41946-53-6 42952-29-4 49647-58-7 50610-28-1 51387-92-9 55302-96-0 56932-44-6 58480-17-4 61224-35-9 61693-42-3 62496-02-0 62952-42-5 63969-46-0 64993-07-3 66566-48-1 66635-40-3 68391-32-2 69825-83-8 70643-19-5 71134-97-9 74918-21-1 77484-77-6 79352-72-0 82576-75-8 83220-31-9 83220-31-9D, mixts. containing 83763-47-7

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(hair dyeing compns. containing oxocyclopentenones)

IT 83960-83-2 84540-47-6 84540-50-1 85679-78-3 85926-99-4  
87798-73-0 87814-15-1 90817-34-8 93841-24-8 93923-57-0  
95576-89-9 102574-14-1 104333-09-7 108946-76-5 110102-86-8  
110952-48-2 114402-54-9 115423-86-4 117907-43-4 126335-41-9  
128729-30-6 130582-56-8 137290-86-9 144644-13-3 155601-17-5

159661-42-4 202525-73-3 202525-74-4 202525-75-5 202525-76-6  
 202525-77-7 202525-78-8 202525-79-9 211872-02-5 215377-52-9  
 220118-56-9 251450-62-1 346593-13-3 346684-81-9 380897-75-6  
 380897-77-8 380897-79-0 381211-38-7 381211-39-8 381211-42-3  
 381211-44-5 381211-96-7 381212-15-3 381212-17-5  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (hair dyeing compns. containing oxocyclopentenenes)  
 IT 58626-49-6P 108946-70-9P  
 RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological  
 study); PREP (Preparation); USES (Uses)  
 (hair dyeing compns. containing oxocyclopentenenes)  
 IT 75-52-5, reactions 78-92-2, 2-Butanol 97-86-9, Isobutyl methacrylate  
 541-47-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hair dyeing compns. containing oxocyclopentenenes)  
 IT 17190-21-5P 30434-70-9P 58626-47-4P 58626-48-5P 109892-46-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (hair dyeing compns. containing oxocyclopentenenes)  
 IT 500-85-6D, Indophenol, derivs.  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (hair dyeing compns. containing oxocyclopentenenes)  
 RN 500-85-6 HCAPLUS  
 CN 2,5-Cyclohexadien-1-one, 4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX  
 NAME)



L84 ANSWER 16 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2001:923229 HCAPLUS  
 DN 136:58496  
 TI Hair dyeing compositions containing quinoxaline derivatives  
 IN Gross, Wibke; Hoeffkes, Horst; Martin, Hans-Dieter; Moeller, Hinrich;  
 Oberkobusch, Doris  
 PA Henkel K.-G.a.A., Germany  
 SO Ger. Offen.; 22 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10029929	A1	20011220	DE 2000-10029929	20000617
	WO 2001097754	A2	20011227	WO 2001-EP6544	20010609
	WO 2001097754	A3	20020523		
	W: AU, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	EP 1292271	A2	20030319	EP 2001-957836	20010609
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
PRAI	DE 2000-10029929	A	20000617		
	WO 2001-EP6544	W	20010609		

OS MARPAT 136:58496  
 AB Hair dye compns. contain at least one quinoxaline derivative containing e.g.,  
 C1-4 alkenyl, hydroxyalkyl, carboxyalkyl groups, and halo groups. Thus,  
 1,1,3-trimethylcyclo-2-penten[1,2-b]quinoxaline-2-carboxaldehyde (I) was  
 prepared in a series of steps and formulated into a hair dye formulation  
 containing I 4.4, Natrosol 250HR 2.0 and water to 100.0 g.

IC ICM A61K007-13  
 CC 62-3 (Essential Oils and Cosmetics)  
 Section cross-reference(s): 28  
 ST hair dye quinoxaline prepn  
 IT Amines, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (aromatic, primary; hair dyeing compns. containing quinoxaline derivs.)

IT Nitriles, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (aromatic; hair dyeing compns. containing quinoxaline derivs.)

IT Amines, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (aryl, secondary; hair dyeing compns. containing quinoxaline derivs.)

IT Amines, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (diamines, aromatic; hair dyeing compns. containing quinoxaline derivs.)

IT Hair preparations  
 (dyes; hair dyeing compns. containing quinoxaline derivs.)

IT Shampoos  
 (hair dyeing compns. containing quinoxaline derivs.)

IT Amino acids, biological studies  
 Phenols, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (hair dyeing compns. containing quinoxaline derivs.)

IT Collagens, biological studies  
 Elastins  
 Keratins  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (hydrolyzates; hair dyeing compns. containing quinoxaline derivs.)

IT Peptides, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (oligopeptides; hair dyeing compns. containing quinoxaline derivs.)

IT Protein hydrolyzates  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (soya; hair dyeing compns. containing quinoxaline derivs.)

IT Protein hydrolyzates  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (wheat gluten; hair dyeing compns. containing quinoxaline derivs.)

IT Glutens  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (wheat, hydrolyzates; hair dyeing compns. containing quinoxaline derivs.)

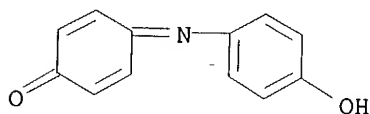
IT 56-87-1, L-Lysine, biological studies 59-48-3, Oxindol 59-92-7, DOPA,  
 biological studies 60-18-4, L-Tyrosine, biological studies 62-53-3,  
 Aniline, biological studies 63-91-2, L-Phenylalanine, biological studies  
 65-49-6, 4-Aminosalicylic acid 67-52-7, Barbituric acid 70-26-8,  
 L-Ornithine 71-00-1, L-Histidine, biological studies 73-22-3,  
 L-Tryptophan, biological studies 74-79-3, Arginine, biological studies  
 77-32-7 81-11-8, 4,4'-Diaminostilbene-2,2'-disulfonic acid 83-30-7,  
 2,4,6-Trihydroxybenzoic acid 83-33-0, Indan-1-one 83-56-7,  
 1,5-Dihydroxynaphthalene 84-65-1D, Anthraquinone, derivs. 87-02-5,  
 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1, Pyrogallol  
 88-21-1, 2-Aminobenzenesulfonic acid 88-74-4, 2-Nitroaniline 89-57-6,

5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid 90-05-1,  
 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0, 4-Amino-5-  
 hydroxynaphthalene-2,7-disulfonic acid 91-29-2, 4'-Amino-4-  
 nitrodiphenylamine-2-sulfonic acid 92-44-4, 2,3-Dihydroxynaphthalene  
 92-65-9 95-55-6, 2-Aminophenol 95-70-5 95-88-5 96-91-3,  
 1-Hydroxy-2-amino-4,6-dinitrobenzene 96-93-5, 3-Amino-4-hydroxy-5-  
 nitrobenzene sulfonic acid 98-37-3, 3-Amino-4-hydroxybenzenesulfonic  
 acid 98-79-3, Pyrrolidone-5-carboxylic acid 99-05-8, 3-Aminobenzoic  
 acid 99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid  
 99-50-3, 3,4-Dihydroxybenzoic acid 99-56-9, 1,2-Diamino-4-nitrobenzene  
 100-01-6, 4-NitroAniline, biological studies 101-77-9,  
 4,4'-Diaminodiphenylmethane 101-80-4, 4,4'-Diaminodiphenyl ether  
 102-32-9, 3,4-Dihydroxyphenylacetic acid 106-50-3, 1,4-Benzenediamine,  
 biological studies 107-95-9,  $\beta$ -Alanine 108-45-2,  
 1,3-Benzenediamine, biological studies 108-46-3, Resorcin, biological  
 studies 108-72-5, 1,3,5-Triaminobenzene 108-73-6, Phloroglucin  
 109-00-2, 3-Hydroxypyridine 110-85-0, Piperazidine, biological studies  
 110-86-1, Pyridine, biological studies 110-89-4, Piperidine, biological  
 studies 118-12-7, Fischer base 118-70-7, 4,5,6-Triaminopyrimidine  
 118-92-3, 2-Aminobenzoic acid 119-34-6, 4-Amino-2-nitrophenol  
 119-59-5, 4,4'-Diaminodiphenylsulfoxide 119-70-0, 4,4'-  
 Diaminodiphenylamine-2-sulfonic acid 119-72-2, 4-Amino-4'-nitrostilbene-  
 2,2'-disulfonic acid 120-80-9, 1,2-Benzenediol, biological studies  
 121-47-1, 3-Aminobenzenesulfonic acid 121-57-3, 4-Aminobenzenesulfonic  
 acid 123-30-8, 4-Aminophenol 123-31-9, Hydroquinone, biological  
 studies 123-75-1, Pyrrolidine, biological studies 139-65-1,  
 4,4'-Diaminodiphenylsulfide 141-84-4 141-86-6, 2,6-Diaminopyridine  
 142-08-5, 2-Hydroxypyridine 147-85-3, L-Proline, biological studies  
 149-91-7, Gallic acid, biological studies 150-13-0, 4-Aminobenzoic acid  
 150-19-6, 3-Methoxyphenol 150-75-4, 4-Methylaminophenol 150-76-5,  
 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine 288-13-1, Pyrazole  
 288-32-4, Imidazol, biological studies 288-88-0, 1H-1,2,4-Triazole  
 452-58-4, 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0  
 488-87-9, 2,5-Dimethylresorcin 496-73-1, 4-Methylresorcin 498-94-2,  
 Piperidine-4-carboxylic acid 498-95-3, Piperidine-3-carboxylic acid  
**500-85-6D**, Indophenol, derivs. 504-15-4 504-17-6,  
 Thiobarbituric acid 504-24-5, 4-Aminopyridine 504-29-0,  
 2-Aminopyridine 517-22-6, 2,4-Dimethyl-3-ethylpyrrole 531-86-2  
 533-31-3, 3,4-Methylenedioxyphenol 533-73-3, Hydroxyhydroquinone  
 535-75-1, Piperidine-2-carboxylic acid 535-87-5, 3,5-Diaminobenzoic acid  
 537-65-5, 4,4'-Diaminodiphenylamine 553-86-6, Cumaranone 556-03-6,  
 Tyrosine 570-24-1, 6-Nitro-o-toluidine 578-66-5, 8-Aminoquinoline  
 580-17-6, 3-Aminoquinoline 580-22-3, 2-Aminoquinoline 582-17-2,  
 2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6,  
 2,3-Diaminobenzoic acid 606-55-3 606-57-5, 2-Amino-1-nitronaphthalene  
 608-08-2, 3-Indoxylacetate 608-25-3, 2-Methylresorcin 610-74-2,  
 2,5-Diaminobenzoic acid 610-81-1, 4-Amino-3-nitrophenol 611-03-0,  
 2,4-Diaminobenzoic acid 611-98-3, 4,4'-Diaminobenzophenone 614-82-4,  
 2,4-Dihydroxyphenylacetic acid 615-66-7 615-71-4, 1,2,4-  
 Triaminobenzene 616-45-5, Pyrrolidone 616-47-7, 1-Methylimidazole  
 619-05-6, 3,4-Diaminobenzoic acid 623-09-6, 4-Methylaminoaniline  
 626-64-2, 4-Hydroxypyridine 636-25-9, 2,5-Diaminophenol 876-87-9  
 934-22-5, 5-Aminobenzimidazole 1004-74-6, 2,4,5,6-Tetraaminopyrimidine  
 1004-75-7, 4-Hydroxy-2,5,6-Triaminopyrimidine 1123-55-3,  
 7-Aminobenzothiazole 1123-93-9, 5-Aminobenzothiazole 1125-60-6,  
 5-Aminoisoquinoline 1197-55-3, 4-Aminophenylacetic acid 1455-77-2,  
 3,5-Diamino-1,2,4-triazole 1571-72-8, 3-Amino-4-hydroxybenzoic acid  
 1820-80-0, 3-Aminopyrazole 1953-54-4, 5-Hydroxyindole 2374-03-0,  
 4-Amino-3-hydroxybenzoic acid 2380-84-9, 7-Hydroxyindole 2380-86-1,



6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2510-01-2,  
 1-Dicyanomethyleneindan 2654-52-6, 2,3-Dimethylbenzothiazolium tosylate  
 2785-06-0, 2,3-Dimethylbenzothiazolium iodide 2835-95-2,  
 2-Methyl-5-aminophenol 2835-99-6 2871-01-4, HC Red 3 3131-52-0,  
 5,6-Dihydroxyindole 3158-63-2, 1,3-Dimethylthiobarbituric acid  
 3167-49-5, 6-Aminonicotinic acid 3342-78-7, 2-Aminophenylacetic acid  
 3769-62-8, Gallion 3855-78-5, 2,3,4-Trimethylpyrrole 4318-76-7,  
 2,5-Diaminopyridine 4331-29-7, 7-Aminobenzimidazole 4506-66-5,  
 1,2,4,5-Tetraaminobenzene tetrahydrochloride 4928-43-2,  
 2-Dimethylamino-5-aminopyridine 5007-67-0, 3,3',4,4'-  
 Tetraaminobenzophenone 5099-39-8 5131-58-8 5192-03-0, 5-Aminoindole  
 5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole 5217-47-0,  
 1,3-Diethylthiobarbituric acid 5307-14-2, 1,4-Diamino-2-nitrobenzene  
 5318-27-4, 6-Aminoindole 5345-47-1, 2-Aminonicotinic acid 5392-28-9  
 5418-63-3, 1,2,3,3-Tetramethyl-3H-Indolium iodide 5434-20-8,  
 3-Aminophthalic acid 5718-83-2 5850-35-1, Acid blue 29 5930-28-9,  
 2,6-Dichloro-4-aminophenol 5959-52-4, 3-Amino-2-naphthoic acid  
 6201-65-6 6222-46-4, Palatine chrome green GC 6247-27-4, Mordant brown  
 4 6259-50-3, 6-Dimethylamino-4-hydroxy-2-naphthalenesulfonic acid  
 6358-09-4, 2-Amino-6-chloro-4-nitrophenol 6399-72-0,  
 6-Amino-7-hydroxynaphthalene-2-sulfonic acid 6628-04-2,  
 4-Aminoquinaldine 6967-12-0, 6-Aminoindazole 7411-49-6 7575-35-1  
 7749-47-5, 2-Amino-4-methoxy-6-methylpyrimidine 7768-28-7,  
 2-(2-Hydroxyethyl)phenol 10173-66-7, 1-Amino-4-nitro-2-(2-  
 nitrobenzylideneamino)-benzene 13754-19-3, 4,5-Diaminopyrimidine  
 14268-66-7, 3,4-Methylenedioxyaniline 14338-36-4, 3-Aminophenylacetic  
 acid 16082-33-0, 3,5-Diaminopyrazole 16214-27-0, Indan-1,2-dione  
 16859-86-2, 1,4-Dimethylquinolinium iodide 16867-03-1,  
 2-Amino-3-hydroxypyridine 19335-11-6, 5-Aminoindazole 20103-09-7  
 22715-34-0, 2-Hydroxy-4,5,6-Triaminopyrimidine 23244-87-3,  
 2,4,5-Triaminopyridine 23894-07-7 24119-24-2, N,N-Bis[2-(4-  
 aminophenoxy)-ethyl]methanamine trihydrochloride 24905-87-1, HC Red 7  
 28020-38-4, 2,3-Diamino-6-methoxypyridine 28491-52-3 29539-03-5,  
 5,6-Dihydroxyindoline 29705-39-3 31835-64-0, 3-Amino-3'-nitrobiphenyl  
 34572-45-7, 2-Nitro-1-amino-4-bis(2-hydroxyethylamino)benzene 35011-47-3  
 41946-53-6 42952-29-4 50610-28-1, 2-Chloro-5-nitro-N-hydroxyethyl-1,4-  
 phenylenediamine 51387-92-9 55302-96-0 56932-44-6, HC Yellow 5  
 58480-17-4 61224-35-9 61693-42-3, 3-Amino-2,4-dichlorophenol  
 62496-02-0, 2-Methylamino-4,5,6-triaminopyrimidine 63886-74-8  
 63969-46-0 64993-07-3 66566-48-1 66635-40-3, 4,4'-Diaminostilbene  
 dihydrochloride 69825-83-8, 6-Nitro-2,5-diaminopyridine 70643-19-5,  
 2,4-Diaminophenoxyethanol 71134-97-9 74918-21-1, 1,3-Bis(2,4-  
 diaminophenoxy)propane tetrahydrochloride 77484-77-6,  
 3-Amino-6-methylamino-2-nitropyridine 79352-72-0 82576-75-8, HC Violet  
 1 83763-47-7 84540-47-6, 2,6-Dihydroxy-3,4-dimethylpyridine  
 84540-50-1, 6-Methyl-3-amino-2-chlorophenol 85679-78-3,  
 3,5-Diamino-2,6-dimethoxypyridine 85926-99-4, 4-Hydroxyindoline  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (hair dyeing compns. containing quinoxaline derivs.)  
 IT 90817-34-8 93841-24-8 93923-57-0 95576-89-9, HC Red 10  
 104333-09-7, 2-Hydroxymethyl-4-aminophenol 110102-86-8,  
 2-Methyl-5-amino-4-chlorophenol 110952-48-2 114402-54-9,  
 1,3-Bis(4-aminophenylamino)propane 115423-86-4, 1,3-Diamino-2,4-  
 dimethoxybenzene 117907-43-4 128729-30-6, 1,3-Bis(N-4-aminophenyl)2-  
 hydroxyethylamino-2-propanol 130582-56-8, 1,3-Bis(4-aminophenylamino)2-  
 propanol 137290-86-9 144644-13-3, 1,8-Bis(2,5-diaminophenoxy)-3,6-  
 dioxaoctane tetrahydrochloride 155601-17-5, 4,5-Diamino-1-(2-  
 hydroxyethyl)pyrazole 159661-42-4, 2,5-Dihydroxy-4-morpholinoaniline  
 202525-71-1 202525-73-3, 2,4,5-Triaminophenol trihydrochloride

202525-74-4, Pentaaminobenzene pentahydrochloride 202525-75-5, Hexaaminobenzene hexahydrochloride 202525-76-6, 2,4,6-Triaminoresorcin trihydrochloride 202525-77-7 202525-78-8, 4,6-Diaminopyrogallol dihydrochloride 202525-79-9 211872-02-5 215377-52-9, 3,4-Methylenediaminoaniline 220118-56-9 223383-77-5, 4-Amino-3-hydroxynaphthalenesulfonic acid 346593-13-3 380897-57-4 380897-58-5 380897-59-6 380897-60-9 380897-61-0 380897-62-1 380897-63-2 380897-64-3 380897-65-4 380897-66-5 380897-67-6 380897-68-7 380897-69-8 380897-75-6 380897-77-8 380897-79-0  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (hair dyeing compns. containing quinoxaline derivs.)  
 IT 380897-49-4P 380897-56-3P  
 RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (hair dyeing compns. containing quinoxaline derivs.)  
 IT 78-92-2, 2-Butanol 95-54-5, 1,2-Benzenediamine, reactions 541-47-9 4760-34-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hair dyeing compns. containing quinoxaline derivs.)  
 IT 30434-70-9P 108946-70-9P 109892-46-8P 380897-50-7P 380897-51-8P 380897-52-9P 380897-54-1P 380897-55-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (hair dyeing compns. containing quinoxaline derivs.)  
 IT 500-85-6D, Indophenol, derivs.  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (hair dyeing compns. containing quinoxaline derivs.)  
 RN 500-85-6 HCAPLUS  
 CN 2,5-Cyclohexadien-1-one, 4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX NAME)



L84 ANSWER 17 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2001:489199 HCAPLUS  
 DN 135:81831  
 TI Hair dyeing compositions containing heterocyclic compounds  
 IN Rose, David; Hoeffkes, Horst; Meinigke, Bernd  
 PA Henkel KGaA, Germany  
 SO PCT Int. Appl., 32 pp.  
 CODEN: PIXXD2

DT Patent  
 LA German

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001047477	A2	20010705	WO 2000-EP12893	20001218
	WO 2001047477	A3	20020207		
	W: AU, BR, CA, CN, CZ, HU, JP, NO, PL, RU, SK, US, VN				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	DE 10061990	A1	20010705	DE 2000-10061990	20001213
	EP 1244419	A2	20021002	EP 2000-991207	20001218

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, FI, CY, TR

PRAI DE 1999-19962873 A 19991224  
DE 2000-10061990 A 20001213  
WO 2000-EP12893 W 20001218

OS MARPAT 135:81831

AB Hair dyeing contain as the coloring component, ACH:BCH:A' (where A and A'  
= e.g., a heterocyclic compound, and B is a part of a heterocyclic compound).  
The inventive agents are especially useful for dyeing keratin containing  
fibers,  
particularly in the absence of oxidizing agents. The compds. of the  
invention were added to a hair cream formulation obtained from anionic,  
zwitterionic, and nonionic surfactants, sodium sulfite and ammonium  
sulfate and a color strengthener.

IC ICM A61K007-00

CC 62-3 (Essential Oils and Cosmetics)

ST hair dye heterocyclic compd

IT Alcohols, biological studies  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(C12-18; hair dyeing compns. containing heterocyclic compds.)

IT Alcohols, biological studies  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(C16-18, ethoxylated; hair dyeing compns. containing heterocyclic compds.)

IT Surfactants  
(anionic; hair dyeing compns. containing heterocyclic compds.)

IT Hair preparations  
(dyes; hair dyeing compns. containing heterocyclic compds.)

IT Surfactants  
(nonionic; hair dyeing compns. containing heterocyclic compds.)

IT Surfactants  
(zwitterionic; hair dyeing compns. containing heterocyclic compds.)

IT 36574-66-0D, N-coco acyl derivs.  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(cocoamidopropyl betaine; hair dyeing compns. containing heterocyclic  
compds.)

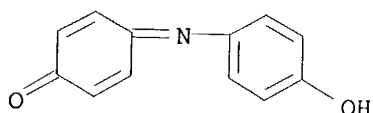
IT 71-00-1, L-Histidine, biological studies 84-65-1, Anthraquinone  
98-79-3, Pyrrolidone-5-carboxylic acid 109-00-2, 3-HydroxyPyridine  
110-86-1, Pyridine, biological studies 110-89-4, Piperidine, biological  
studies 123-75-1, Pyrrolidine, biological studies 142-08-5,  
2-Hydroxypyridine 147-85-3, L-Proline, biological studies 288-13-1,  
Pyrazole 288-32-4, Imidazole, biological studies 288-88-0,  
1H-1,2,4-Triazole 498-94-2, Piperidine-4-carboxylic acid 498-95-3,  
Piperidine-3-carboxylic acid 500-85-6, Indophenol 535-75-1,  
Piperidine-2-carboxylic acid 616-45-5, Pyrrolidone 616-47-7,  
1-Methylimidazole 626-64-2, 4-HydroxyPyridine 7722-84-1, Hydrogen  
peroxide, biological studies 31905-57-4, Nitrophenylenediamine  
43093-74-9 83138-08-3, Dehyton K  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(hair dyeing compns. containing heterocyclic compds.)

IT 500-85-6, Indophenol  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(hair dyeing compns. containing heterocyclic compds.)

RN 500-85-6 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX

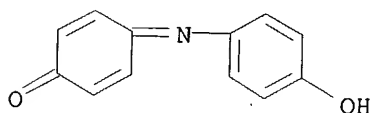
NAME)



L84 ANSWER 18 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2001:488453 HCAPLUS  
 DN 135:81829  
 TI Hair dyeing compositions containing heterocyclic compounds  
 IN Rose, David; Hoeffkes, Horst; Meinigke, Bernd  
 PA Henkel K.-G.a.A., Germany  
 SO Ger. Offen., 18 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10061990	A1	20010705	DE 2000-10061990	20001213
	WO 2001047477	A2	20010705	WO 2000-EP12893	20001218
	WO 2001047477	A3	20020207		
	W: AU, BR, CA, CN, CZ, HU, JP, NO, PL, RU, SK, US, VN				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	EP 1244419	A2	20021002	EP 2000-991207	20001218
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
PRAI	DE 1999-19962873	A1	19991224		
	DE 2000-10061990	A	20001213		
	WO 2000-EP12893	W	20001218		
OS	MARPAT 135:81829				
AB	Hair dyeing compns. contain as the coloring component, ACH:BCH:A' (where A and A' = e.g., a heterocyclic compound, and B is a part of cyclic compound). The compds. of the invention were added to a hair cream formulation obtained from anionic, zwitterionic, and nonionic surfactants, sodium sulfite and ammonium sulfate and a color strengthener.				
IC	ICM A61K007-13				
CC	62-3 (Essential Oils and Cosmetics)				
ST	hair dye heterocycle				
IT	Alcohols, biological studies				
	RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)				
	(C12-18; hair dyeing compns. containing heterocycles)				
IT	Alcohols, biological studies				
	RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)				
	(C16-18, ethoxylated; hair dyeing compns. containing heterocycles)				
IT	Surfactants				
	(anionic; hair dyeing compns. containing heterocycles)				
IT	Hair preparations				
	(creams; hair dyeing compns. containing heterocycles)				
IT	Hair preparations				
	(dyes, oxidative; hair dyeing compns. containing heterocycles)				
IT	Hair preparations				

(dyes; hair dyeing compns. containing heterocycles)  
 IT Shampoos  
 (hair dyeing compns. containing heterocycles)  
 IT Surfactants  
 (nonionic; hair dyeing compns. containing heterocycles)  
 IT Surfactants  
 (zwitterionic; hair dyeing compns. containing heterocycles)  
 IT 71-00-1, L-Histidine, biological studies 84-65-1, Anthraquinone  
 98-79-3, Pyrrolidone-5-carboxylic acid 109-00-2, 3-HydroxyPyridine  
 110-86-1, Pyridine, biological studies 110-89-4, Piperidine, biological  
 studies 123-75-1, Pyrrolidine, biological studies 142-08-5,  
 2-HydroxyPyridine 147-85-3, L-Proline, biological studies 288-13-1,  
 Pyrazole 288-32-4, Imidazole, biological studies 288-88-0,  
 1H-1,2,4-Triazole 498-94-2, Piperidine-4-carboxylic acid 498-95-3,  
 Piperidine-3-carboxylic acid 500-85-6, Indophenol 535-75-1,  
 Piperidine-2-carboxylic acid 616-45-5, Pyrrolidone 616-47-7,  
 1-Methylimidazole 626-64-2, 4-HydroxyPyridine 9004-82-4, Texapon N28  
 31905-57-4, Nitrophenylenediamine 43093-74-9 83138-08-3, Dehyton K  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
 (Uses)  
 (hair dyeing compns. containing heterocycles)  
 IT 500-85-6, Indophenol  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
 (Uses)  
 (hair dyeing compns. containing heterocycles)  
 RN 500-85-6 HCAPLUS  
 CN 2,5-Cyclohexadien-1-one, 4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX  
 NAME)



L84 ANSWER 19 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2001:298859 HCAPLUS  
 DN 134:315874  
 TI Dibenzopyrroles for use in dyeing keratin fibers  
 IN Moeller, Hinrich; Oberkobusch, Doris; Hoeffkes, Horst  
 PA Henkel K.-G.a.A., Germany  
 SO Ger. Offen., 12 pp.  
 CODEN: GWXXBX

DT Patent  
 LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19951135	A1	20010426	DE 1999-19951135	19991023
	WO 2001030312	A1	20010503	WO 2000-EP10198	20001017
	W: AU, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				

PRAI DE 1999-19951135 A 19991023

OS MARPAT 134:315874

AB Dibenzopyrroles may be combined with other organic compds. for use in hair dye formulations. Other compds. may include 2-chloro-p-phenylenediamine,

4-aminophenol, o-phenylenediamine, 3,4-methylenedioxyaniline, etc. In addition, compds. such as 1,2,3,3-tetramethyl-3H-indolium methanesulfonate, barbituric acid, thiobarbituric acid, oxindole, etc. may be added.

IC ICM A61K007-13

CC 62-3 (Essential Oils and Cosmetics)

ST hair dye dibenzopyrrole deriv

IT Oxidizing agents

Shampoos

(dibenzopyrroles for use in dyeing keratin fibers)

IT Keratins

RL: PEP (Physical, engineering or chemical process); PROC (Process)

(dibenzopyrroles for use in dyeing keratin fibers)

IT Hair preparations

(dyes, oxidative; dibenzopyrroles for use in dyeing keratin fibers)

IT 59-48-3, Oxindole 62-53-3, Aniline, biological studies 65-49-6, 4-Aminosalicylic acid 67-52-7, Barbituric acid 71-00-1, Histidine, biological studies 77-32-7 81-11-8, 4,4'-Diaminostilbene-2,2'-disulfonic acid 83-30-7, 2,4,6-Trihydroxybenzoic acid 83-56-7, 1,5-Dihydroxynaphthalene 84-65-1D, Anthraquinone, derivs. 86-74-8D, Dibenzopyrrole, derivs. 87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1, Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6, 5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid 90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4, 2,3-Dihydroxynaphthalene 92-65-9 95-54-5, 1,2-Benzenediamine, biological studies 95-55-6, 2-Aminophenol 95-70-5, 2,5-Diaminotoluene 95-88-5, 4-Chlororesorcinol 98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid 98-79-3, Pyrrolidone-5-carboxylic acid 99-05-8, 3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic acid 100-01-6, 4-Nitroaniline, biological studies 101-77-9, 4,4'-Diaminodiphenylmethane 101-80-4, 4,4'-Diaminodiphenylether 103-82-2, Phenylacetic acid, biological studies 106-50-3, p-Phenylenediamine, biological studies 108-45-2, 1,3-Benzenediamine, biological studies 108-46-3, Resorcinol, biological studies 108-72-5, 1,3,5-Triaminobenzene 108-73-6, Phloroglucin 109-00-2, 3-Hydroxypyridine 110-85-0, Piperazidine, biological studies 110-86-1, Pyridine, biological studies 110-89-4, Piperidine, biological studies 118-12-7, 1,3,3-Trimethyl-2-methyleneindoline 118-70-7, 4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 119-59-5, 4,4'-Diaminodiphenylsulfoxide 119-70-0, 4,4'-Diaminodiphenylamine-2-sulfonic acid 120-80-9, Pyrocatechol, biological studies 121-47-1, 3-Aminobenzenesulfonic acid 121-57-3, 4-Aminobenzenesulfonic acid 123-30-8, 4-Aminophenol 123-31-9, Hydroquinone, biological studies 123-75-1, Pyrrolidine, biological studies 139-65-1, 4,4'-Diaminodiphenylsulfide 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine 142-08-5, 2-Hydroxypyridine 147-85-3, Proline, biological studies 149-91-7, Gallic acid, biological studies 150-13-0, 4-Aminobenzoic acid 150-19-6, 3-Methoxyphenol 150-75-4, 4-Methylaminophenol 150-76-5, 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine 288-13-1, Pyrazole 288-32-4, Imidazole, biological studies 288-88-0, 1H-1,2,4-Triazole 452-58-4, 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0 488-87-9, 2,5-Dimethylresorcinol 496-73-1, 4-Methylresorcinol 498-94-2, Piperidine-4-carboxylic acid 498-95-3, Piperidine-3-carboxylic acid 500-85-6D, Indophenol, derivs. 504-15-4, 5-Methylresorcinol 504-17-6, Thiobarbituric acid 504-24-5, 4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6, 2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol 533-73-3, Hydroxyhydroquinone 535-75-1, Piperidine-2-carboxylic acid 535-87-5, 3,5-Diaminobenzoic acid

537-65-5, 4,4'-Diaminodiphenylamine 553-86-6, Cumaranone 578-66-5,  
8-Aminoquinoline 580-17-6, 3-Aminoquinoline 580-22-3, 2-Aminoquinoline  
582-17-2, 2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6,  
2,3-Diaminobenzoic acid 606-55-3 608-08-2, 3-Indoxyl acetate  
608-25-3, 2-Methylresorcinol 610-74-2, 2,5-Diaminobenzoic acid  
611-03-0, 2,4-Diaminobenzoic acid 611-98-3, 4,4'-Diaminobenzophenone  
615-66-7, 2-Chloro-p-phenylenediamine 615-71-4, 1,2,4-Triaminobenzene  
616-45-5, Pyrrolidone 616-47-7, 1-Methylimidazole 619-05-6,  
3,4-Diaminobenzoic acid 623-09-6, 4-Methylaminoaniline 626-64-2,  
4-Hydroxypyridine 636-25-9, 2,5-Diaminophenol 876-87-9 934-22-5,  
5-Aminobenzimidazole 1004-74-6, 2,4,5,6-Tetraaminopyrimidine  
1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 1123-55-3,  
7-Aminobenzothiazole 1123-93-9, 5-Aminobenzothiazole 1125-60-6,  
5-Aminoisoquinoline 1197-55-3, 4-AminoPhenylacetic acid 1455-77-2,  
3,5-Diamino-1,2,4-triazole 1483-97-2 1484-05-5 1571-72-8,  
3-Amino-4-hydroxybenzoic acid 1820-80-0, 3-Aminopyrazole 1953-54-4,  
5-Hydroxyindole 2374-03-0, 4-Amino-3-hydroxybenzoic acid 2380-84-9,  
7-Hydroxyindole 2380-86-1, 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole  
2654-52-6, 2,3-Dimethylbenzothiazolium p-toluenesulfonate 2785-06-0,  
2,3-Dimethylbenzothiazolium iodide 2835-95-2, 2-Methyl-5-aminophenol  
2835-99-6, 3-Methyl-4-aminophenol 2871-01-4, 2-Nitro-4-amino-1-(2-  
hydroxyethylamino)benzene 3131-52-0, 5,6-Dihydroxyindole 3158-63-2,  
1,3-Dimethylthiobarbituric acid 3167-49-5, 6-Aminonicotinic acid  
3215-37-0 3342-78-7, 2-AminoPhenylacetic acid 3855-78-5,  
2,3,4-Trimethylpyrrole 4318-76-7, 2,5-Diaminopyridine 4331-29-7,  
7-Aminobenzimidazole 4506-66-5, 1,2,4,5-Tetraaminobenzene  
tetrahydrochloride 4928-43-2, 2-Dimethylamino-5-aminopyridine  
5007-67-0, 3,3',4,4'-Tetraaminobenzophenone 5131-58-8 5192-03-0,  
5-Aminoindole 5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole  
5217-47-0, 1,3-Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole  
5345-47-1, 2-Aminonicotinic acid 5418-63-3, 1,2,3,3-Tetramethyl-3H-  
indolium iodide 5434-20-8, 3-Aminophthalic acid 5718-83-2,  
Rhodanine-3-acetic acid 5930-28-9, 2,6-Dichloro-4-aminophenol  
5959-52-4, 3-Amino-2-naphthoic acid 6201-65-6, 2-Chlororesorcinol  
6259-50-3, 6-Dimethylamino-4-hydroxy-2-naphthalenesulfonic acid  
6358-09-4, 2-Amino-6-chloro-4-nitrophenol 6399-72-0,  
6-Amino-7-hydroxynaphthalene-2-sulfonic acid 6628-04-2,  
4-Aminoquinaldine 6967-12-0, 6-Aminoindazole 7411-49-6 7570-45-8  
7575-35-1 7749-47-5, 2-Amino-4-methoxy-6-methylpyrimidine 7768-28-7,  
2-(2-Hydroxyethyl)phenol 13754-19-3, 4,5-Diaminopyrimidine 14268-66-7,  
3,4-Methylenedioxyaniline 14338-36-4, 3-AminoPhenylacetic acid  
14501-66-7 16082-33-0, 3,5-Diaminopyrazole 16867-03-1,  
2-Amino-3-hydroxypyridine 18073-18-2 19335-11-6, 5-Aminoindazole  
20103-09-7, 2,5-Dichloro-p-phenylenediamine 21240-56-2 22715-34-0,  
2-Hydroxy-4,5,6-triaminopyrimidine 23244-87-3, 2,4,5-Triaminopyridine  
23894-07-7, 3,6-Dihydroxy-2,7-naphthalenedisulfonic acid 24119-24-2,  
N,N-Bis-[2-(4-aminophenoxy)ethyl]methylamine trihydrochloride  
24144-00-1, 1,4-Dimethylquinaldinium iodide 28020-38-4,  
2,3-Diamino-6-methoxypyridine 28491-52-3 29539-03-5,  
5,6-Dihydroxyindoline 29705-39-3 31905-57-4D, Nitrophenylenediamine,  
derivs. 41946-53-6 42952-29-4, 1-Ethyl-2-methylnaphtho[1,2-  
d]thiazolium p-toluenesulfonate 43093-74-9D, Nitroaminophenol, derivs.  
50610-28-1 51387-92-9 55302-96-0, 2-Methyl-5-(2-hydroxyethylamino)-  
phenol 58480-17-4, 1,2-Dimethylnaphtho[1,2-d]thiazolium  
p-toluenesulfonate 61224-35-9 61693-42-3, 3-Amino-2,4-dichlorophenol  
62496-02-0, 2-Methylamino-4,5,6-triaminopyrimidine 66566-48-1  
66635-40-3, 4,4'-Diaminostilbene dihydrochloride 70643-19-5,  
2,4-Diaminophenoxyethanol 74918-21-1, 1,3-Bis-(2,4-  
diaminophenoxy)propane tetrahydrochloride 79352-72-0,

4-Amino-2-aminomethylphenol 83763-47-7 84540-47-6,  
 2,6-Dihydroxy-3,4-dimethylpyridine 84540-50-1, 6-Methyl-3-amino-2-  
 chlorophenol 85679-78-3, 3,5-Diamino-2,6-dimethoxypyridine 85926-99-4,  
 4-Hydroxyindoline 90817-34-8, 3-Amino-2-methylamino-6-methoxypyridine  
 93841-24-8, 2-(2,5-Diaminophenyl)ethanol 104333-09-7,  
 2-Hydroxymethyl-4-aminophenol 110102-86-8, 2-Methyl-5-amino-4-  
 chlorophenol 110952-48-2 114402-54-9, 1,3-Bis-(4-  
 aminophenylamino)propane 115423-86-4, 1,3-Diamino-2,4-dimethoxybenzene  
 117907-43-4 128729-30-6, 1,3-Bis-[(4-aminophenyl)-2-  
 hydroxyethylamino]propan-2-ol 130582-56-8, 1,3-Bis-(4-  
 aminophenylamino)propan-2-ol 137290-86-9, 5-(2-Hydroxyethylamino)-4-  
 methoxy-2-methylphenol 159661-42-4, 2,5-Dihydroxy-4-morpholinoaniline  
 166035-63-8 202525-71-1 202525-73-3, 2,4,5-Triaminophenol  
 trihydrochloride 202525-74-4, Pentaaminobenzene pentahydrochloride  
 202525-75-5, Hexaaminobenzene hexahydrochloride 202525-76-6,  
 2,4,6-Triaminoresorcinol trihydrochloride 202525-77-7 202525-78-8,  
 4,6-Diaminopyrogallol dihydrochloride 202525-79-9 215377-52-9,  
 3,4-Methylenediaminoaniline 220118-56-9 223383-77-5,  
 4-Amino-3-hydroxynaphthalenesulfonic acid

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
 (Uses)

(dibenzopyrroles for use in dyeing **keratin** fibers)

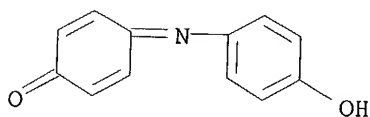
IT 500-85-6D, Indophenol, derivs.

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
 (Uses)

(dibenzopyrroles for use in dyeing **keratin** fibers)

RN 500-85-6 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX  
 NAME)



L84. ANSWER 20 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:298858 HCAPLUS

DN 134:315873

TI Aromatic aldehydes and ketones with imidazoles as coloring agents for  
 keratin fibers

IN Moeller, Hinrich; Oberkobusch, Doris; Hoeffkes, Horst

PA Henkel K.-G.a.A., Germany

SO Ger. Offen., 14 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19951134	A1	20010426	DE 1999-19951134	19991023
	WO 2001034106	A1	20010517	WO 2000-EP10125	20001014
	W: AU, BR, CA, CN, CZ, HU, JP, NO, PL, RU, SK, US, VN				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1235549	A1	20020904	EP 2000-971379	20001014
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				



IE, FI, CY

JP 2003513898	T2	20030415	JP 2001-536107	20001014
US 6790239	B1	20040914	US 2002-110915	20020418
PRAI DE 1999-19951134	A	19991023		
WO 2000-EP10125	W	20001014		

OS MARPAT 134:315873

AB Oxidative hair dyes containing aromatic aldehydes and ketones combined with imidazoles and other heterocyclic compds. are disclosed. Aromatic components may include salicylaldehyde, 3-hydroxybenzaldehyde, 4-hydroxybenzaldehyde, o-anisaldehyde, etc. Heterocyclic components may include 1,4-dimethylquinolinium salts, 1,2-dimethylquinolinium salts, 1,4-dimethylpyridinium salts, 3-ethyl-2-methylbenzothiazolium salts, etc. These may be combined with rhodanine, barbituric acid, thiobarbituric acid, oxindole, etc.

IC ICM A61K007-13

CC 62-3 (Essential Oils and Cosmetics)

ST oxidative hair dye arom ketone

IT Shampoos  
(aromatic aldehydes and ketones with imidazoles as coloring agents for keratin fibers)

IT Keratins  
RL: BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)  
(aromatic aldehydes and ketones with imidazoles as coloring agents for keratin fibers)

IT Alkaline earth salts  
Bromides, biological studies  
Chlorides, biological studies  
Iodides, biological studies  
RL: BUU (Biological use, unclassified); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)  
(aromatic aldehydes and ketones with imidazoles as coloring agents for keratin fibers)

IT Hair preparations  
(dyes, oxidative; aromatic aldehydes and ketones with imidazoles as coloring agents for keratin fibers)

IT 59-48-3, Oxindole 67-52-7, Barbituric acid 71-00-1, Histidine, biological studies 75-75-2D, Methanesulfonic acid, salts 75-93-4, Methylsulfate 84-65-1D, Anthraquinone, derivs. 89-84-9 90-02-8, Salicylaldehyde, biological studies 93-02-7, 2,5-Dimethoxybenzaldehyde 95-01-2, 2,4-Dihydroxybenzaldehyde 98-11-3D, Benzenesulfonic acid, salts, biological studies 98-79-3, Pyrrolidone-5-carboxylic acid 99-93-4, 4-Hydroxyacetophenone 100-83-4, 3-Hydroxybenzaldehyde 104-15-4D, p-Toluenesulfonic acid, salts 109-00-2, 3-Hydroxypyridine 110-85-0, Piperazine, biological studies 110-86-1, Pyridine, biological studies 110-89-4, Piperidine, biological studies 120-14-9, 3,4-Dimethoxybenzaldehyde 120-57-0, Piperonal 121-33-5, Vanillin 123-08-0, 4-Hydroxybenzaldehyde 123-11-5, p-Anisaldehyde, biological studies 123-75-1, Pyrrolidine, biological studies 135-02-4, o-Anisaldehyde 139-85-5, 3,4-Dihydroxybenzaldehyde 141-84-4, Rhodanine 142-08-5, 2-Hydroxypyridine 147-85-3, Proline, biological studies 288-13-1, Pyrazole 288-32-4, Imidazole, biological studies 288-88-0, 1H-1,2,4-Triazole 458-36-6, Coniferylaldehyde 487-70-7, 2,4,6-Trihydroxybenzaldehyde 498-94-2, Piperidine-4-carboxylic acid 498-95-3, Piperidine-3-carboxylic acid 500-85-6D, Indophenol, derivs. 504-17-6, Thiobarbituric acid 535-75-1, Piperidine-2-carboxylic acid 553-86-6, Cumarone 574-96-9, 1-Hydroxy-2-naphthaldehyde 582-24-1, 2-Hydroxyacetophenone 606-23-5,

Indan-1,3-dione 608-08-2, 3-Indoxylacetate 613-45-6,  
 2,4-Dimethoxybenzaldehyde 613-84-3, 2-Hydroxy-5-methylbenzaldehyde  
 616-45-5, Pyrrolidone 616-47-7, 1-Methylimidazole 621-59-0,  
 Isovanillin 626-64-2, 4-Hydroxypyridine 698-27-1, 2-Hydroxy-4-  
 methylbenzaldehyde 708-06-5, 2-Hydroxy-1-naphthaldehyde 824-42-0,  
 2-Hydroxy-3-methylbenzaldehyde 1080-12-2, 4-Hydroxy-3-  
 methoxybenzylideneacetone 1080-74-6 1121-26-2 1194-98-5,  
 2,5-Dihydroxybenzaldehyde 1493-13-6D, Trifluoromethanesulfonic acid,  
 salts 2144-08-3, 2,3,4-Trihydroxybenzaldehyde 2233-18-3,  
 3,5-Dimethyl-4-hydroxybenzaldehyde 2420-16-8, 3-Chloro-4-  
 hydroxybenzaldehyde 2510-01-2 2538-87-6, 4-Hydroxycinnamaldehyde  
 2786-34-7, 2,3-Dimethylbenzothiazolium chloride 3158-63-2,  
 1,3-Dimethylthiobarbituric acid 3160-35-8 3392-97-0,  
 2,6-Dimethoxybenzaldehyde 3541-42-2, 2-Hydroxycinnamaldehyde 3653-04-1  
 3859-41-4, 1,3-Cyclopentanedione 3934-87-0, 3,4-Dihydroxy-5-  
 methoxybenzaldehyde 4680-08-4, 2,4,6-Trimethylpyrylium chloride  
 5217-47-0, 1,3-Diethylthiobarbituric acid 5284-74-2 5392-12-1,  
 2-Methoxy-1-naphthaldehyde 5418-67-7 5718-83-2, Rhodanine-3-acetic  
 acid 7770-45-8, 4-Hydroxy-1-naphthaldehyde 10031-82-0,  
 4-Ethoxybenzaldehyde 13677-79-7, 3,4,5-Trihydroxybenzaldehyde  
 13984-15-1 15174-69-3, 4-Hydroxy-3-methylbenzaldehyde 15626-30-9  
 15971-29-6, 4-Methoxy-1-naphthaldehyde 16872-11-0D, Tetrafluoroboric  
 acid, salts 19224-32-9 23302-83-2 24677-78-9, 2,3-  
 Dihydroxybenzaldehyde 26153-38-8, 3,5-Dihydroxybenzaldehyde 27945-16-0  
 28141-13-1 29814-03-7, 3-Ethyl-2-methylbenzothiazolium chloride  
 31905-57-4D, Nitrophenylenediamine, derivs. 32353-56-3 35094-87-2,  
 2,4,5-Trihydroxybenzaldehyde 36232-82-3 38039-57-5 38078-47-6  
 43093-74-9D, Nitroaminophenol, derivs. 55745-70-5 56405-37-9  
 56405-66-4 57439-26-6 57439-29-9 62439-66-1 63149-01-9  
 64274-81-3 79407-66-2 87345-53-7 91420-11-0 198704-94-8  
 199107-25-0 200128-68-3 293742-81-1 335448-84-5 335448-85-6  
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 335449-08-6 335449-09-7

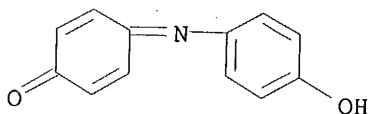
RL: BUU (Biological use, unclassified); PEP (Physical, engineering or  
 chemical process); BIOL (Biological study); PROC (Process); USES (Uses)  
 (aromatic aldehydes and ketones with imidazoles as coloring agents for  
**keratin** fibers)

IT 500-85-6D, Indophenol, derivs.

RL: BUU (Biological use, unclassified); PEP (Physical, engineering or  
 chemical process); BIOL (Biological study); PROC (Process); USES (Uses)  
 (aromatic aldehydes and ketones with imidazoles as coloring agents for  
**keratin** fibers)

RN 500-85-6 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX  
 NAME)

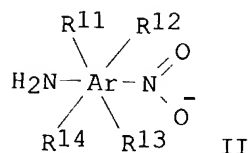
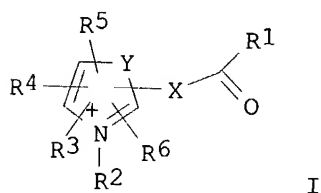


L84 ANSWER 21 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2001:114931 HCAPLUS  
 DN 134:183269  
 TI Dyeing agent for keratinous fibers  
 IN Moller, Hinrich; Oberkobusch, Doris; Hoffkes, Horst

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

PA Henkel Kommanditgesellschaft auf Aktien, Germany  
 SO PCT Int. Appl., 28 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001010379	A2	20010215	WO 2000-EP7405	20000731
	WO 2001010379	A3	20011115		
	W: AU, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	DE 19937289	A1	20010215	DE 1999-19937289	19990806
	EP 1200050	A2	20020502	EP 2000-956364	20000731
	EP 1200050	B1	20040922		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	JP 2003506386	T2	20030218	JP 2001-514904	20000731
	US 6755872	B1	20040629	US 2002-48253	20020521
PRAI	DE 1999-19937289	A	19990806		
	WO 2000-EP7405	W	20000731		
OS	MARPAT 134:183269				
GI					

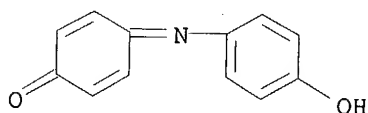


AB The invention concerns a dyeing agent for keratinous fibers, in particular human hair. Said agent contains at least a combination consisting of aldehydes and heteroarom. ketones of formula (I) wherein: R1 represents a hydrogen atom, a C1-C4 alkyl, aryl or heteroaryl group; R2 represents a C1-C4 alkyl, aryl aralkyl or heteroaryl group; R3, R4, R5 and R6 represent a hydrogen or halogen atom, a C1-C4 alkyl, C1-C4 alkoxy or C1-C4 hydroxyalkoxy group, a hydroxy, nitro, amino group capable of being substituted with C1-C4 alkyl groups, or a C1-C4 acyl group, two of the radicals capable of forming together a condensed aromatic ring, or one of the radicals being capable of forming with R1 or with R2 a pentagonal, hexagonal or heptagonal condensed ring which can also comprise a condensed aromatic ring. X represents a direct bond, a vinylene, phenylene or vinylene-phenylene group optionally substituted; Y represents a sulfur

atom, an oxygen atom, the group CR7R8, wherein R7 and R8 represent a C1-C4 alkyl group, the group NR10, wherein R10 represents a C1-C4 alkyl group, or a vinylene group optionally substituted. Z represents halide, arene sulfate, C1-C4 alkane sulfonate, C1-C4 perfluoroalkane sulfonate, perhalogenate, sulfate, hydrogen sulfate, tetrafluoroborate, hexafluorophosphate or tetrachlorozincate; and consisting of aromatic or heteroarom. nitrosamines of formula (II), wherein: AR represents benzene, naphthalene, pyridine, quinoline, isoquinoline, pyrimidine, indol, benzimidazol, benzothiazol, indazole, benzoxazol, quinoxaline, quinazoline, cinnoline, acenaphthene, fluorene, biphenyl, diphenylamine, stilbene, benzylidene-aminobenzene. R11, R12, R13 and R14 represent a hydrogen atom, a halogen atom, a C1-4 alkyl, C1-4 alkoxy, C1-4 aminoalkyl, C1-4 hydroxyalkoxy, hydroxy, nitro, carboxy, C1-4 alkoxycarbonyl, sulfo, sulfamoyl, arylazo, or amino group, capable of being substituted with C1-4 alkyl or C1-4 hydroxyalkyl groups; and/or consisting of a reaction product of compds. of formula I and II.

- IC ICM A61K
- CC 62-3 (Essential Oils and Cosmetics)
- ST hair dye aryl deriv formulation
- IT Surfactants
  - (anionic; dyeing agent for keratinous fibers)
- IT Oxidizing agents
  - Shampoos
  - (dyeing agent for keratinous fibers)
- IT Keratins
  - RL: BOC (Biological occurrence); BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); OCCU (Occurrence); RACT (Reactant or reagent)
  - (dyeing agent for keratinous fibers)
- IT Hair preparations
  - (dyes; dyeing agent for keratinous fibers)
- IT Surfactants
  - (nonionic; dyeing agent for keratinous fibers)
- IT Surfactants
  - (zwitterionic; dyeing agent for keratinous fibers)
- IT 94158-13-1, HC Red 13
  - RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
  - (HC Red 13; dyeing agent for keratinous fibers)
- IT 6358-09-4, Rodol 9R Base
  - RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
  - (Rodol 9R Base; dyeing agent for keratinous fibers)
- IT 71-00-1, Histidine, biological studies 98-79-3, Pyrrolidone 5-carboxylic acid 109-00-2, 3-Hydroxypyridine 110-85-0, Piperazidine, biological studies 110-86-1, Pyridine, biological studies 110-89-4, Piperidine, biological studies 123-75-1, Pyrrolidine, biological studies 142-08-5, 2-Hydroxypyridine 147-85-3, Proline, biological studies 288-13-1, Pyrazole 288-32-4, Imidazole, biological studies 498-94-2, Piperidine 4-carboxylic acid 498-95-3, Piperidine 3-carboxylic acid 535-75-1, Piperidine 2-carboxylic acid 616-45-5, Pyrrolidone 616-47-7, 1-Methylimidazole 626-64-2, 4-Hydroxypyridine
  - RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
  - (color intensifier; dyeing agent for keratinous fibers)
- IT 610-81-1 2871-01-4 5307-14-2 6285-57-0 56932-44-6 82228-89-5 117907-43-4 176742-32-8, Basic Brown 17 223398-02-5 223398-08-1

223398-72-9 325964-25-8  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (dyeing agent for keratinous fibers)  
 IT 84-65-1D, Anthraquinone, derivs. 288-88-0, 1H-1,2,4-Triazole  
 500-85-6, Indophenol 31905-57-4D, Nitrophenylenediamine, derivs.  
 43093-74-9D, Nitroaminophenol, derivs.  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (dyeing agent for **keratinous** fibers)  
 IT 7722-84-1, Hydrogen peroxide, biological studies  
 RL: BUU (Biological use, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)  
 (oxidizing agent; dyeing agent for keratinous fibers)  
 IT 500-85-6, Indophenol  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (dyeing agent for **keratinous** fibers)  
 RN 500-85-6 HCAPLUS  
 CN 2,5-Cyclohexadien-1-one, 4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX NAME)



L84 ANSWER 22 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2001:96869 HCAPLUS  
 DN 134:152366  
 TI Hair dye compositions containing aromatic aldehydes or ketones  
 IN Moeller, Hinrich; Oberkobusch, Doris; Hoeffkes, Horst  
 PA Henkel K.-G.a.A., Germany  
 SO Ger. Offen., 16 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19936911	A1	20010208	DE 1999-19936911	19990805
	WO 2001013866	A1	20010301	WO 2000-EP7163	20000802
	W: AU, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1200051	A1	20020502	EP 2000-963997	20000802
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	JP 2003514767	T2	20030422	JP 2001-518006	20000802
	US 6770102	B1	20040803	US 2002-48208	20020503
PRAI	DE 1999-19936911	A	19990805		
	WO 2000-EP7163	W	20000802		
OS	MARPAT 134:152366				
AB	Hair dyeing compns. contain a combination of aromatic aldehydes and/or ketones with and heterocyclic compds., e.g., quinolinium salts,				

benzothiazolium salts, and color strengthening agents such as piperidine, pyrrolidine, and pyrazole. Thus, a mixture of 4-dimethylaminobenzaldehyde and 1-ethyl-2-methylquinolinium iodide containing piperidine at a pH of 9.0 gave a violet-red color to the hair.

IC ICM A61K007-13

CC 62-3 (Essential Oils and Cosmetics)

ST hair dye arom aldehyde ketone; ethylmethylquinolinium iodide  
dimethylaminobenzaldehyde piperidine hair dye; quinolinium iodide  
benzaldehyde piperidine hair dye

IT Aldehydes, biological studies

Ketones, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)

(aromatic; hair dye compns. containing aromatic aldehydes or ketones)

IT Hair preparations

(dyes; hair dye compns. containing aromatic aldehydes or ketones)

IT 59-48-3 67-52-7, Barbituric acid 71-00-1, Histidine, biological  
studies 84-65-1D, Anthraquinone, derivs. 84-83-3 100-10-7  
109-00-2, 3-Pyridinol 110-85-0, Piperazidine, biological studies  
110-86-1, Pyridine, biological studies 110-89-4, Piperidine, biological  
studies 117-92-0 120-21-8 123-75-1, Pyrrolidine, biological studies  
141-84-4 142-08-5, 2(1H)-Pyridinone 147-85-3, Proline, biological  
studies 149-87-1 288-13-1, Pyrazole 288-32-4, Imidazole, biological  
studies 288-88-0, 1H-1,2,4-Triazole 487-89-8, 1H-Indole-3-  
carboxaldehyde 498-94-2, 4-Piperidinecarboxylic acid 498-95-3,  
3-Piperidinecarboxylic acid **500-85-6D**, Indophenol, derivs.  
504-17-6, ThioBarbituric acid 535-75-1, 2-Piperidinecarboxylic acid  
579-72-6 606-23-5, 1H-Indene-1,3(2H)-dione 606-55-3 616-45-5,  
Pyrrolidone 616-47-7 626-64-2, 4-Pyridinol 1199-59-3 1204-86-0  
1424-66-4 1971-81-9 2124-31-4 2156-29-8 3158-63-2 3785-01-1  
3785-05-5 3859-41-4, 1,3-Cyclopentanedione 3915-61-5 4181-05-9  
5217-47-0 5718-83-2, Rhodanine 3-acetic acid 6203-18-5 6285-94-5  
7169-34-8, Coumaranone 7570-45-8 10040-98-9 10338-57-5 14933-76-7  
18241-33-3D, salts 18241-35-5D, salts 18241-36-6D, salts  
18241-37-7D, salts 18241-44-6D, salts 19012-03-4 20327-08-6  
23302-83-2 24235-06-1 28141-13-1 31905-57-4, Nitrophenylenediamine  
33985-71-6 40265-71-2D, salts 41602-56-6 41927-50-8 42846-14-0D,  
salts 42846-15-1D, salts 42846-19-5D, salts 42846-38-8D, salts  
42922-08-7D, salts 42952-29-4 43093-74-9, Nitroaminophenol  
46149-03-5D, salts 46297-20-5D, salts 50571-73-8D, salts  
50579-67-4D, salts 50580-50-2D, salts 51980-54-2 56405-37-9  
58028-76-5 60126-37-6D, salts 63149-01-9 63149-33-7 84562-48-1  
90134-10-4 96196-21-3 97807-64-2 194099-39-3 323575-81-1  
323575-82-2 323575-83-3 323575-84-4 323575-89-9D, halide and  
sulfonate salts

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)

(hair dye compns. containing aromatic aldehydes or ketones)

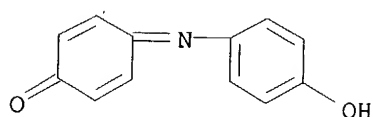
IT **500-85-6D**, Indophenol, derivs.

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)

(hair dye compns. containing aromatic aldehydes or ketones)

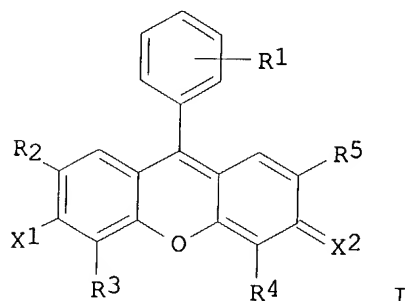
RN 500-85-6 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX  
NAME)



L84 ANSWER 23 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2000:880595 HCAPLUS  
 DN 134:46626  
 TI Hair dye compositions containing xanthenes  
 IN Moeller, Hinrich; Meinigke, Bernd  
 PA Henkel K.-G.a.A., Germany  
 SO Ger. Offen., 14 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19926377	A1	20001214	DE 1999-19926377	19990610
	WO 2000076466	A1	20001221	WO 2000-EP5044	20000602
	W: AU, BR, CA, CN, CZ, HU, JP, NO, PL, RU, SK, US, VN				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRAI	DE 1999-19926377	A	19990610		
OS	MARPAT 134:46626				
GI					



AB A hair dye composition comprises a xanthene derivative (I, R1 = e.g., H, Cl-4 carboxyl or a sulfone; R2, R3, R4, and R5 = H, Cl-4 alkyl, Cl-4 alkoxy or OH; when X2 = O, then X1 = OH). Addnl. the compns. contains compds. with amino, aminocarboxylate or amino hydroxy groups, N heterocycles, etc. A formulation containing pyrogallol red, 2,5-diaminotoluene sulfate (1:1) and a surfactant dyed the hair fibers medium brown.

IC ICM C09B011-28  
 ICS A61K007-13

CC 62-3 (Essential Oils and Cosmetics)  
 Section cross-reference(s): 41

ST xanthene hair dye oxidative; amino phenol xanthene hair dye

IT Phenols, biological studies  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(amino; hair dye compns. containing xanthenes)  
IT Surfactants  
(anionic; hair dye compns. containing xanthenes)  
IT Nitriles, biological studies  
Nitro compounds  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(aromatic; hair dye compns. containing xanthenes)  
IT Hair preparations  
(dyes, oxidative; hair dye compns. containing xanthenes)  
IT Hair preparations  
(dyes; hair dye compns. containing xanthenes)  
IT Amino acids, biological studies  
Phenols, biological studies  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(hair dye compns. containing xanthenes)  
IT Aromatic compounds  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(nitro; hair dye compns. containing xanthenes)  
IT Surfactants  
(nonionic; hair dye compns. containing xanthenes)  
IT Peptides, biological studies  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(oligopeptides; hair dye compns. containing xanthenes)  
IT Amines, biological studies  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(phenolic; hair dye compns. containing xanthenes)  
IT Amines, biological studies  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(primary; hair dye compns. containing xanthenes)  
IT Amines, biological studies  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(secondary; hair dye compns. containing xanthenes)  
IT Surfactants  
(zwitterionic; hair dye compns. containing xanthenes)  
IT 59-48-3 62-53-3, Benzenamine, biological studies 62-53-3D, Aniline,  
derivs. 65-49-6 67-52-7, 2,4,6(1H,3H,5H)-Pyrimidinetrione 81-11-8  
81-88-9, Rhodamine B 83-30-7 83-56-7, 1,5-Naphthalenediol 84-65-1D,  
Anthraquinone, derivs. 87-02-5 87-66-1, 1,2,3-Benzenetriol 88-21-1  
89-57-6 89-86-1 90-05-1 90-15-3, 1-Naphthalenol 90-20-0 92-44-4,  
2,3-Naphthalenediol 92-65-9 92-83-1D, Xanthene, derivs. 95-54-5,  
1,2-Benzenediamine, biological studies 95-55-6 95-70-5 95-88-5  
98-37-3 98-86-2, biological studies 99-05-8 99-07-0 99-31-0  
99-50-3 100-01-6, biological studies 101-77-9 101-80-4 102-32-9  
106-50-3, 1,4-Benzenediamine, biological studies 108-45-2,  
1,3-Benzenediamine, biological studies 108-46-3, 1,3-Benzenediol,  
biological studies 108-72-5, 1,3,5-Benzenetriamine 108-73-6,  
1,3,5-Benzenetriol 116-63-2 118-12-7 118-70-7, 4,5,6-  
Pyrimidinetriamine 118-92-3 119-59-5 119-70-0 120-80-9,  
1,2-Benzenediol, biological studies 121-47-1 121-57-3 123-30-8  
123-31-9, 1,4-Benzenediol, biological studies 139-65-1 141-84-4  
141-86-6, 2,6-Pyridinediamine 149-91-7, biological studies 150-13-0  
150-19-6 150-75-4 150-76-5 156-81-0, 2,4-Pyrimidinediamine



288-88-0, 1H-1,2,4-Triazole 452-58-4, 2,3-Pyridinediamine 462-08-8,  
 3-Pyridinamine 488-87-9 496-73-1 **500-85-6D**, Indophenol,  
 derivs. 504-15-4 504-17-6 504-24-5, 4-Pyridinamine 504-29-0,  
 2-Pyridinamine 517-22-6 533-31-3, 1,3-Benzodioxol-5-ol 533-73-3,  
 1,2,4-Benzenetriol 535-87-5 537-65-5 553-86-6, 2(3H)-Benzofuranone  
 578-66-5, 8-Quinolinamine 580-17-6, 3-Quinolinamine 580-22-3,  
 2-Quinolinamine 582-17-2, 2,7-Naphthalenediol 591-27-5 603-81-6  
 606-55-3 608-08-2 608-25-3 610-74-2 611-03-0 611-98-3 614-82-4  
 615-50-9 615-66-7 615-71-4, 1,2,4-Benzenetriamine 619-05-6  
 623-09-6 636-25-9 876-87-9 934-22-5, 1H-Benzimidazol-5-amine  
 975-17-7 989-38-8, Rhodamine 6G 1004-74-6, Pyrimidinetetramine  
 1004-75-7 1123-55-3, 7-Benzothiazolamine 1123-93-9,  
 5-Benzothiazolamine 1125-60-6, 5-Isoquinolinamine 1197-55-3  
 1571-72-8 1820-80-0, 1H-Pyrazol-3-amine 1953-54-4, 1H-Indol-5-ol  
 2321-07-5, Fluorescein 2374-03-0 2380-84-9, 1H-Indol-7-ol 2380-86-1,  
 1H-Indol-6-ol 2380-94-1, 1H-Indol-4-ol 2654-52-6 2785-06-0  
 2835-95-2 2835-99-6 2871-01-4 3131-52-0, 1H-Indole-5,6-diol  
 3158-63-2 3167-49-5 3342-78-7 3855-78-5 4318-76-7,  
 2,5-Pyridinediamine 4331-29-7, 1H-Benzimidazol-4-amine 4506-66-5  
 4928-43-2 5007-67-0 5131-58-8 5192-03-0, 1H-Indol-5-amine  
 5192-04-1, 1H-Indol-7-amine 5192-23-4, 1H-Indol-4-amine 5217-47-0  
 5318-27-4, 1H-Indol-6-amine 5345-47-1 5392-28-9 5418-63-3  
 5434-20-8 5718-83-2 5959-52-4 6201-65-6 6259-50-3 6358-09-4  
 6399-72-0 6492-79-1 6628-04-2 6967-12-0, 1H-Indazol-6-amine  
 7336-20-1 7411-49-6 7575-35-1 7749-47-5 7768-28-7 13558-31-1,  
 Rhodamine 110 13754-19-3, 4,5-Pyrimidinediamine 14268-66-7,  
 1,3-Benzodioxol-5-amine 14338-36-4 16082-33-0, 1H-Pyrazole-3,5-diamine  
 16859-86-2 16867-03-1 19335-11-6, 1H-Indazol-5-amine 20103-09-7  
 22715-34-0 23244-87-3, 2,4,5-Pyridinetriamine 23894-07-7 24119-24-2  
 25265-76-3D, Phenylenediamine, derivs. or analogs 28020-38-4  
 29539-03-5 29705-39-3 31905-57-4D, NitroPhenylenediamine, derivs.  
 32638-88-3, Pyrogallol red 41927-50-8 41946-53-6 50610-28-1  
 53666-79-8 54381-16-7 55302-96-0 56216-28-5 61224-35-9  
 61693-42-3 62496-02-0 62669-77-6, Rhodamine 116 perchlorate  
 64339-18-0, Rhodamine 101 66566-48-1 66635-40-3 70643-19-5  
 74918-21-1 79352-72-0 82190-32-7 83732-72-3 83763-47-7  
 84540-47-6 84540-50-1 85679-78-3 85926-99-4 90817-34-8  
 93841-24-8 93841-25-9 104333-09-7 110102-86-8 114402-54-9  
 115423-86-4 117907-43-4 126335-41-9 128729-30-6 130582-56-8  
 137290-86-9 144644-13-3 159661-42-4 202525-71-1 202525-73-3  
 202525-74-4 202525-75-5 202525-76-6 202525-77-7 202525-78-8  
 202525-79-9 215377-52-9 220118-56-9 312958-14-8

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
 (Uses)

(hair dye compns. containing xanthenes)

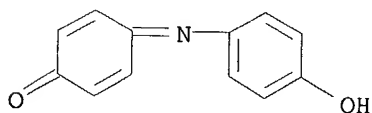
IT **500-85-6D**, Indophenol, derivs.

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
 (Uses)

(hair dye compns. containing xanthenes)

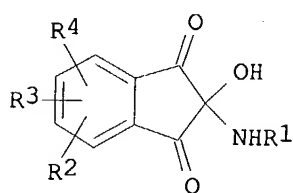
RN 500-85-6 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX  
 NAME)

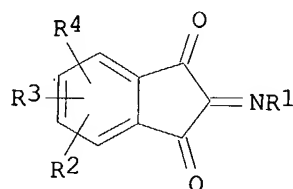


L84 ANSWER 24 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2000:227963 HCAPLUS  
 DN 132:255752  
 TI Use of ninhydrin derivatives for coloring keratin-containing fibers  
 IN Moeller, Hinrich; Hoeffkes, Horst; Oberkobusch, Doris  
 PA Henkel K.-G.a.A., Germany  
 SO Ger. Offen., 14 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19845481	A1	20000406	DE 1998-19845481	19981002
PRAI	DE 1998-19845481		19981002		
OS	MARPAT 132:255752				
GI					



I



II

AB Ninhydrin derivs. I and II [R1 = (substituted) Ph or naphthyl, (condensed) heterocyclyl, (thio)carbamoyl, ureido, C1-6 carboxyalkyl, guanidino; R2-R4 = H, halo, C1-4 alkyl, C1-4 alkoxy, (substituted) amino; 2 of R2-R4 may complete a condensed benzene ring] are direct hair dyes which are equivalent to oxidative dyes in terms of depth of color, masking of gray hair, and fastness with little or no staining or sensitization of the skin. They may be used in combination with oxidizing agents and oxidative dye precursors to produce hair colors with extraordinary brilliance and depth and with many color nuances. Thus, a suspension of 10 mmol 2-hydroxy-2-phenylamino-1,3-indandione, 10 mmol NaOAc, and 1 drop 20% fatty alkyl ether sulfate solution in 100 mL H2O was heated briefly to 80°, cooled, filtered, adjusted to pH 6, and applied to gray hair for 30 min at 30° to produce a violet-blue color; the same composition with N,N-bis(2-hydroxyethyl)-p-phenylenediamine-HCl added before heating produced an intense violet-brown color.

IC ICM A61K007-13  
 ICS D06P003-04

CC 62-3. (Essential Oils and Cosmetics)  
 ST ninhydrin deriv hair dye  
 IT Hair preparations

(dyes; ninhydrin derivs. for coloring keratin-containing fibers)  
 IT 485-47-2D, Ninhydrin, derivs. 17438-16-3 17438-17-4 17438-18-5  
 17438-19-6 17438-20-9 57732-10-2 58137-73-8 60016-93-5  
 60016-98-0 60130-82-7 262613-51-4 262613-53-6 262613-56-9  
 262613-60-5 262613-63-8 262613-65-0 262613-67-2 262613-69-4  
 262613-72-9 262613-74-1 262613-76-3 262613-78-5 262613-80-9

262613-82-1 262613-86-5

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(ninhydrin derivs. for coloring **keratin**-containing fibers)

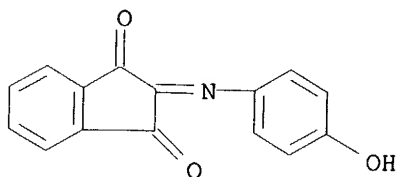
IT 17438-20-9

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(ninhydrin derivs. for coloring **keratin**-containing fibers)

RN 17438-20-9 HCAPLUS

CN 1H-Indene-1,3(2H)-dione, 2-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX NAME)



L84 ANSWER 25 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:172971 HCAPLUS

DN 132:227153

TI Procedure for coloring keratin-containing fibers using stable diazonium salts

IN Moeller, Hinrich; Hoeffkes, Horst

PA Henkel K.-G.a.A., Germany

SO Ger. Offen., 12 pp.

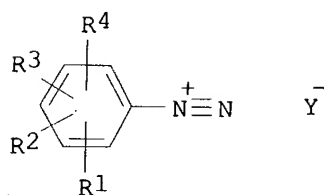
CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	DE 19842071	A1	20000316	DE 1998-19842071	19980915
	WO 2000015184	A1	20000323	WO 1999-EP6526	19990904
	W: AU, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9959733	A1	20000403	AU 1999-59733	19990904
	EP 1113779	A1	20010711	EP 1999-969020	19990904
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002524484	T2	20020806	JP 2000-569769	19990904
PRAI	DE 1998-19842071	A	19980915		
	WO 1999-EP6526	W	19990904		
OS	MARPAT 132:227153				
GI					



- AB Stable diazonium salts I [R1-R4 = H, C1-4 alkyl, C1-4 alkoxy, hydroxy-C1-4-alkoxy, OH, SO<sub>3</sub>H, CO<sub>2</sub>H. (substituted) amino, C1-4 acyl; 2 of R1-R4 may together form a condensed benzene or N-heterocyclic ring; Y = anion], optionally combined with primary or secondary amines, N-heterocyclic compds., aromatic hydroxy compds., and/or active CH compds., are direct 1-step hair dyes which provide an exceptional brilliance and depth of color at least comparable with those obtainable with oxidative dyes. They may be used in the presence or absence of oxidizing agents. Thus, a slurry of 10 mmol 2,5-dimethoxy-4-benzoylaminophenyldiazonium chloride, 10 mmol 2,5-diaminotoluene sulfate, 10 mmol NaOAc, and 1 drop 20% fatty alkyl ether sulfate solution in 100 mL H<sub>2</sub>O was heated briefly to 80°, cooled, filtered, adjusted to pH 6.0, and the solution was applied to gray hair at 30° for 30 min to impart a medium-brown color.
- IC ICM A61K007-13  
ICS D06P003-04; D06P003-14
- CC 62-3 (Essential Oils and Cosmetics)  
Section cross-reference(s): 41
- ST diazonium salt hair dye; benzenediazonium salt hair dye
- IT Nitriles, biological studies  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(aromatic; procedure for coloring keratin-containing fibers using stable diazonium salts)
- IT Hair preparations  
(dyes; procedure for coloring keratin-containing fibers using stable diazonium salts)
- IT Heterocyclic compounds  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(nitrogen; procedure for coloring keratin-containing fibers using stable diazonium salts)
- IT Amines, biological studies  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(primary; procedure for coloring keratin-containing fibers using stable diazonium salts)
- IT Hydroxy compounds  
Phenols, biological studies  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(procedure for coloring keratin-containing fibers using stable diazonium salts)
- IT Amines, biological studies  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(secondary; procedure for coloring keratin-containing fibers using stable diazonium salts)

IT 615-50-9  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
 (Uses)  
 (dprocedure for coloring keratin-containing fibers using stable diazonium salts)

IT 51-81-0, 3-Aminophenol hydrochloride 59-48-3, Oxindole 62-53-3D, Aniline, derivs. 65-49-6, 4-Aminosalicylic acid 67-52-7, Barbituric acid 83-30-7, 2,4,6-Trihydroxybenzoic acid 83-56-7, 1,5-Dihydroxynaphthalene 84-65-1D, Anthraquinone, derivs. 87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1, Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6, 5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid 90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4, 2,3-Dihydroxynaphthalene 95-54-5, o-Phenylenediamine, biological studies 95-55-6, 2-Aminophenol 95-70-5, 2,5-Diaminotoluene 95-88-5, 4-Chlororesorcinol 98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic acid 100-01-6, 4-Nitroaniline, biological studies 101-69-9 101-77-9, 4,4'-Diaminodiphenylmethane 101-80-4, 4,4'-Diaminodiphenyl ether 102-32-9, 3,4-Dihydroxyphenylacetic acid 106-50-3, p-Phenylenediamine, biological studies 108-45-2, m-Phenylenediamine, biological studies 108-46-3, Resorcinol, biological studies 108-72-5, 1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 118-70-7, 4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 119-59-5, 4,4'-Diaminodiphenyl sulfoxide 119-70-0, 4,4'-Diaminodiphenylamine-2-sulfonic acid 120-72-9D, Indole, derivs. 120-80-9, Pyrocatechol, biological studies 121-47-1, 3-Aminobenzenesulfonic acid 121-57-3, 4-Aminobenzenesulfonic acid 123-30-8, 4-Aminophenol 123-31-9, Hydroquinone, biological studies 139-65-1, 4,4'-Diaminodiphenyl sulfide 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine 149-91-7, Gallic acid, biological studies 150-13-0, 4-Aminobenzoic acid 150-19-6, 3-Methoxyphenol 150-75-4, 4-Methylaminophenol 150-76-5, 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine 452-58-4, 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0 488-87-9, 2,5-Dimethylresorcinol 496-15-1D, Indoline, derivs. 496-73-1, 4-Methylresorcinol 500-85-6D, Indophenol, derivs. 504-15-4, 5-Methylresorcinol 504-17-6, Thiobarbituric acid 504-24-5, 4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6, 2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol 533-73-3, Hydroxyhydroquinone 535-87-5, 3,5-Diaminobenzoic acid 537-65-5, 4,4'-Diaminodiphenylamine 575-38-2, 1,7-Dihydroxynaphthalene 575-44-0, 1,6-Dihydroxynaphthalene 578-66-5, 8-Aminoquinoline 580-17-6, 3-Aminoquinoline 580-22-3, 2-Aminoquinoline 581-43-1, 2,6-Dihydroxynaphthalene 582-17-2, 2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6, 2,3-Diaminobenzoic acid 606-55-3 608-25-3, 2-Methylresorcinol 609-20-1, 2,6-Dichloro-p-phenylenediamine 610-74-2, 2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic acid 611-98-3, 4,4'-Diaminobenzophenone 615-66-7, 2-Chloro-p-phenylenediamine 615-71-4, 1,2,4-Triaminobenzene 619-05-6, 3,4-Diaminobenzoic acid 623-09-6, 4-Methylaminoaniline 636-25-9, 2,5-Diaminophenol 876-87-9 887-77-4 934-22-5, 5-Aminobenzimidazole 1004-74-6, 2,4,5,6-Tetraaminopyrimidine 1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 1123-55-3, 7-Aminobenzothiazole 1125-60-6, 5-Aminoisoquinoline 1197-55-3, 4-Aminophenylacetic acid 1455-77-2, 3,5-Diamino-1,2,4-triazole 1571-72-8, 3-Amino-4-hydroxybenzoic acid 1820-80-0, 3-Aminopyrazole 1953-54-4, 5-Hydroxyindole 2374-03-0, 4-Amino-3-hydroxybenzoic acid 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2654-52-6, 2,3-Dimethylbenzothiazolium p-toluenesulfonate 2785-06-0,

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 2835-99-6, 3-Methyl-4-aminophenol 2871-01-4, 2-Nitro-4-amino-1-(2-  
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 5718-83-2, Rhodanine-3-acetic acid 5959-52-4, 3-Amino-2-naphthoic acid  
 6201-65-6, 2-Chlororesorcinol 6259-50-3, 6-Dimethylamino-4-hydroxy-2-  
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 6967-12-0, 6-Aminoindazole 7169-34-8, Coumaranone 7336-20-1  
 7411-49-6, 3,3',4,4'-Tetraaminobiphenyl tetrahydrochloride 7575-35-1,  
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 dimethylpyridine 84540-50-1, 6-Methyl-3-amino-2-chlorophenol  
 85252-22-8 85679-78-3, 3,5-Diamino-2,6-dimethoxypyridine 85926-99-4,  
 4-Hydroxyindoline 90817-34-8, 3-Amino-2-methylamino-6-methoxypyridine  
 93841-24-8, 2-(2,5-Diaminophenyl)ethanol 93841-25-9 104333-09-7  
 110102-86-8, 2-Methyl-5-amino-4-chlorophenol 114402-54-9,  
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 dimethoxybenzene 117907-43-4, 4-Amino-2-nitrodiphenylamine-2'-carboxylic  
 acid 126335-41-9, 2,5-Diaminophenetole 128729-30-6 130582-56-8,  
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 hydroxynaphthalenesulfonic acid 260981-01-9 260981-02-0,

N-(2-Methoxyethyl)-p-phenylenediamine 260981-03-1, 2,3-Dichloro-p-phenylenediamine 261156-43-8  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(procedure for coloring **keratin**-containing fibers using stable diazonium salts)

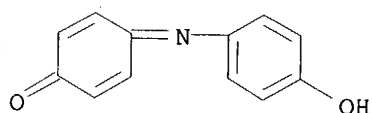
IT 500-85-6D, Indophenol, derivs.

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(procedure for coloring **keratin**-containing fibers using stable diazonium salts)

RN 500-85-6 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX NAME)



L84 ANSWER 26 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:172970 HCAPLUS

DN 132:227152

TI Agent for coloring keratin-containing fibers

IN Moeller, Hinrich; Hoeffkes, Horst

PA Henkel K.-G.a.A., Germany

SO Ger. Offen., 12 pp.

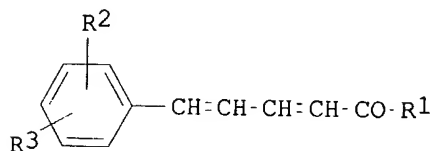
CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19842070	A1	20000316	DE 1998-19842070	19980915
	WO 2000015183	A1	20000323	WO 1999-EP6525	19990904
	W: AU, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9957454	A1	20000403	AU 1999-57454	19990904
	EP 1112055	A1	20010704	EP 1999-944605	19990904
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002524483	T2	20020806	JP 2000-569768	19990904
PRAI	DE 1998-19842070	A	19980915		
	WO 1999-EP6525	W	19990904		
OS	MARPAT 132:227152				
GI					



I

- AB 5-Arylpenta-2,4-dienylcarbonyl compds. [I; R1 = H, C1-4 alkyl; R2, R3 = H, halo, C1-4 alkyl, C1-4 alkoxy, hydroxy-C1-4-alkoxy, OH, NO2, (substituted) amino, C1-4 acyl, heterocyclyl; or 2 of the residues may together form a condensed benzene ring] are direct hair dyes which provide an exceptional brilliance and depth of color and permit many color nuances. They may be used in the presence of oxidizing agents. Thus, a slurry of 10 mmol 5-[4-(N,N-dimethylamino)phenyl]penta-2,4-dien-1-yl, 10 mmol NaOAc, and 1 drop 20% fatty alkyl ether sulfate solution in 100 mL H2O was heated briefly to 80°, cooled, filtered, the pH was adjusted, and the solution was applied to gray hair at 30° for 30 min. The hair took on an orange-brown color at pH 6.0 and a brownish-rose color at pH 2.0.
- IC ICM A61K007-13  
ICS C07C223-06; C07C225-16
- CC 62-3 (Essential Oils and Cosmetics)
- ST arylpentadienylcarbonyl hair dye; pentadienylcarbonyl compd aryl hair dye
- IT Amino acids, biological studies  
Hydroxy compounds  
Peptides, biological studies  
Phenols, biological studies  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(agent for coloring keratin-containing fibers)
- IT Nitriles, biological studies  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(aromatic; agent for coloring keratin-containing fibers)
- IT Hair preparations  
(dyes; agent for coloring keratin-containing fibers)
- IT Heterocyclic compounds  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(nitrogen; agent for coloring keratin-containing fibers)
- IT Amines, biological studies  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(primary; agent for coloring keratin-containing fibers)
- IT Amines, biological studies  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(secondary; agent for coloring keratin-containing fibers)
- IT 59-48-3, Oxindole 62-53-3D, Aniline, derivs. 65-49-6, 4-Aminosalicylic acid 67-52-7, Barbituric acid 83-30-7, 2,4,6-Trihydroxybenzoic acid 83-56-7, 1,5-Dihydroxynaphthalene 84-65-1D, Anthraquinone, derivs. 87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1, Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-25-8 89-57-6, 5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid 90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4, 2,3-Dihydroxynaphthalene 95-54-5, o-Phenylenediamine, biological studies 95-55-6, 2-Aminophenol 95-70-5, 2,5-Diaminotoluene 95-88-5, 4-Chlororesorcinol 98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic acid 100-01-6, 4-Nitroaniline, biological studies 101-77-9, 4,4'-Diaminodiphenylmethane 101-80-4, 4,4'-Diaminodiphenyl ether 102-32-9, 3,4-Dihydroxyphenylacetic acid 106-50-3, p-Phenylenediamine, biological studies 108-45-2, m-Phenylenediamine, biological studies 108-46-3, Resorcinol, biological



studies 108-72-5, 1,3,5-Triaminobenzene 108-73-6, Phloroglucinol  
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 123-30-8, 4-Aminophenol 123-31-9, Hydroquinone, biological studies  
 139-65-1, 4,4'-Diaminodiphenyl sulfide 141-84-4, Rhodanine 141-86-6,  
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 150-13-0, 4-Aminobenzoic acid 150-19-6, 3-Methoxyphenol 150-75-4,  
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 115423-86-4, 1,3-Diamino-2,4-dimethoxybenzene 117907-43-4 126335-41-9,  
 2,5-Diaminophenetole 128729-30-6 130582-56-8, 1,3-Bis(4-  
 aminophenylamino)-2-propanol 135043-64-0, 2-Aminomethyl-4-aminophenol  
 dihydrochloride 137290-86-9, 5-(2-Hydroxyethylamino)-4-methoxy-2-  
 methylphenol 144644-13-3 159661-42-4, 2,5-Dihydroxy-4-  
 morpholinoaniline 187030-52-0 202525-71-1 202525-73-3,  
 2,4,5-Triaminophenol trihydrochloride 202525-74-4, Pentaaminobenzene  
 pentahydrochloride 202525-75-5, Hexaaminobenzene hexahydrochloride  
 202525-76-6, 2,4,6-Triaminoresorcinol trihydrochloride 202525-77-7  
 202525-78-8, 4,6-Diaminopyrogallol dihydrochloride 202525-79-9  
 215377-52-9, 3,4-Methylenediaminoaniline 223383-77-5,  
 4-Amino-3-hydroxynaphthalenesulfonic acid 260980-91-4 260980-92-5  
 260980-93-6 260980-94-7 260980-95-8 260980-96-9 260980-97-0  
 260980-98-1 260980-99-2 260981-00-8 260981-01-9 260981-02-0  
 260981-03-1

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
 (Uses)

(agent for coloring **keratin**-containing fibers)

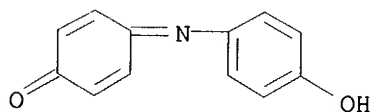
IT 500-85-6D, Indophenol, derivs.

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
 (Uses)

(agent for coloring **keratin**-containing fibers)

RN 500-85-6 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX  
 NAME)



L84 ANSWER 27 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1997:667755 HCAPLUS

DN 127:308426

TI 4,5-Diiminopyrazolines, their preparation and their use in hair dyeing

IN Malle, Gerard; Vidal, Laurent; Samain, Henri

PA Oreal S. A., Fr.

SO Eur. Pat. Appl., 26 pp.

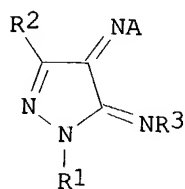
CODEN: EPXXDW

DT Patent

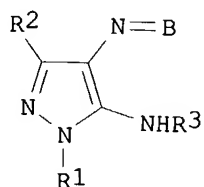
LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 796850	A1	19970924	EP 1997-400515	19970306
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	R: DE, ES, FR, GB, IT				
	FR 2746392	A1	19970926	FR 1996-3544	19960321
	FR 2746392	B1	19980430		
	US 5931973	A	19990803	US 1997-828295	19970321
PRAI	FR 1996-3544		19960321		
OS	MARPAT 127:308426				
GI					



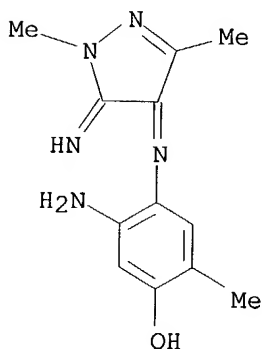
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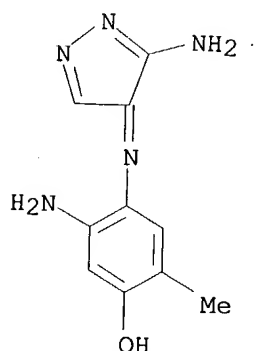
II

- AB The hair dyes I (A = optionally substituted Ph; R1, R2, R3 = H, optionally substituted alkyl or Ph, alkoxy, alkylamino, optionally substituted benzyl, NO2, CF3, amino) or their tautomers II (B = optionally substituted cyclohexylidene; R1, R2, R3 as for I) are obtained from the appropriate 4,5-diaminopyrazoles and phenols or anilines and incorporated into direct or oxidative hair dyeing compns. Thus, 4,5-diamino-1,3-dimethylpyrazole dihydrochloride and 5-amino-2-methylphenol under oxidative conditions gave 5-amino-2-methyl-N-(5-amino-1,3-dimethyl-4-pyrazolyl)-p-quinone monoimine, which could be used with or without H2O2 for dyeing of hair.
- IC ICM C07D231-38  
ICS A61K007-13
- CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)  
Section cross-reference(s): 62
- ST iminopyrazoline prepn hair dye
- IT Alcohols, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(amino; in diiminopyrazoline hair dye compns.)
- IT Hair preparations  
(dyes, oxidative; diiminopyrazolines for)
- IT Hair preparations  
(dyes; diiminopyrazolines for)
- IT Anthraquinone dyes  
Azo dyes  
(in diiminopyrazoline hair dye compns.)
- IT 24905-87-1, 2-Amino-5-(2-hydroxyethylamino)nitrobenzene  
RL: NUU (Other use, unclassified); USES (Uses)  
(colorant; in diiminopyrazoline hair dye compns.)
- IT 29757-24-2, Nitroaniline 31905-57-4, Nitrophenylenediamine 34344-88-2, Nitrodiphenylamine  
RL: TEM (Technical or engineered material use); USES (Uses)

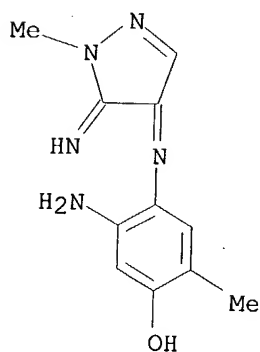
(colorant; in diiminopyrazoline hair dye compns.)  
 IT 197433-52-6P 197433-53-7P 197433-54-8P  
 197433-83-3P 197433-84-4P 197433-85-5P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (diiminopyrazoline hair dye preparation)  
 IT 197433-55-9 197433-56-0 197433-57-1  
 197433-58-2 197433-59-3 197433-60-6  
 197433-61-7 197433-62-8 197433-63-9  
 197433-64-0 197433-65-1 197433-66-2  
 197433-67-3 197433-68-4 197433-69-5  
 197433-70-8 197433-71-9 197433-72-0  
 197433-74-2 197433-75-3 197433-76-4  
 197433-77-5 197433-78-6 197433-79-7  
 197433-80-0 197433-81-1 197433-82-2  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (diiminopyrazolines for hair dye preps.)  
 IT 124-68-5 141-43-5, uses 1320-67-8, Propylene glycol monomethyl ether  
 7664-41-7, Ammonia, uses 7722-84-1, Hydrogen peroxide, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (in diiminopyrazoline hair dye compns.)  
 IT 2835-95-2, 5-Amino-2-methylphenol 21616-59-1, 4,5-Diamino-1-  
 methylpyrazole dihydrochloride 64068-32-2, 4,5-Diamino-1,3-  
 dimethylpyrazole dihydrochloride 131311-65-4, 4,5-Diaminopyrazole  
 dihydrochloride  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (starting material; in diiminopyrazoline hair dye preparation)  
 IT 197433-52-6P 197433-53-7P 197433-54-8P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (diiminopyrazoline hair dye preparation)  
 RN 197433-52-6 HCAPLUS  
 CN Phenol, 5-amino-4-[(1,5-dihydro-5-imino-1,3-dimethyl-4H-pyrazol-4-ylidene)amino]-2-methyl- (9CI) (CA INDEX NAME)



RN 197433-53-7 HCAPLUS  
 CN Phenol, 5-amino-4-[(3-amino-4H-pyrazol-4-ylidene)amino]-2-methyl- (9CI)  
 (CA INDEX NAME)



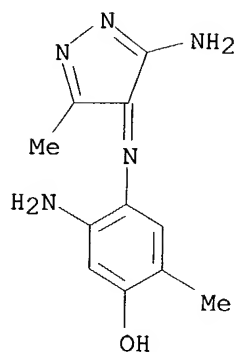
RN 197433-54-8 HCAPLUS  
 CN Phenol, 5-amino-4-[(1,5-dihydro-5-imino-1-methyl-4H-pyrazol-4-ylidene)amino]-2-methyl- (9CI) (CA INDEX NAME)



IT 197433-55-9 197433-56-0 197433-57-1  
 197433-58-2 197433-59-3 197433-60-6  
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 197433-64-0 197433-65-1 197433-66-2  
 197433-67-3 197433-68-4 197433-69-5  
 197433-70-8 197433-71-9 197433-72-0  
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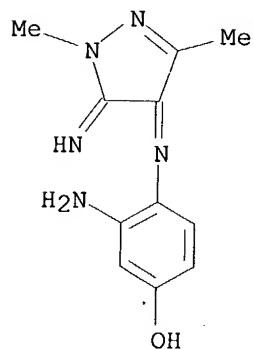
RL: TEM (Technical or engineered material use); USES (Uses)  
 (diiminopyrazolines for hair dye preps.)

RN 197433-55-9 HCAPLUS  
 CN Phenol, 5-amino-4-[(3-amino-5-methyl-4H-pyrazol-4-ylidene)amino]-2-methyl- (9CI) (CA INDEX NAME)



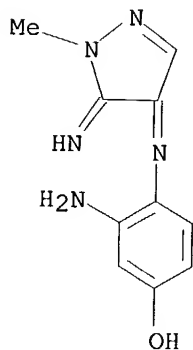
RN 197433-56-0 HCAPLUS

CN Phenol, 3-amino-4-[(1,5-dihydro-5-imino-1,3-dimethyl-4H-pyrazol-4-ylidene)amino]- (9CI) (CA INDEX NAME)



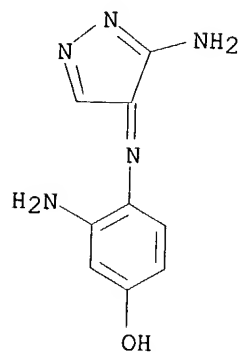
RN 197433-57-1 HCAPLUS

CN Phenol, 3-amino-4-[(1,5-dihydro-5-imino-1-methyl-4H-pyrazol-4-ylidene)amino]- (9CI) (CA INDEX NAME)

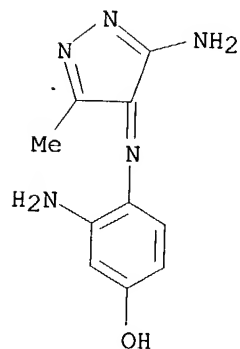


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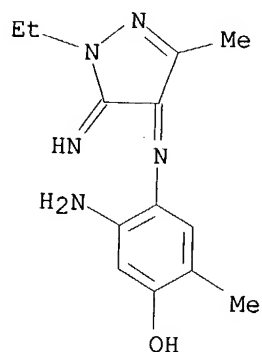
CN Phenol, 3-amino-4-[(3-amino-4H-pyrazol-4-ylidene)amino]- (9CI) (CA INDEX NAME)



RN 197433-59-3 HCAPLUS  
CN Phenol, 3-amino-4-[(3-amino-5-methyl-4H-pyrazol-4-ylidene)amino]- (9CI)  
(CA INDEX NAME)

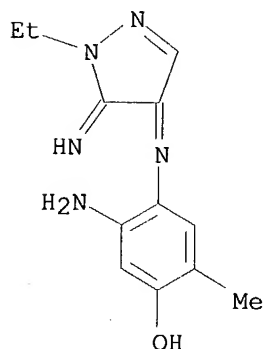


RN 197433-60-6 HCAPLUS  
CN Phenol, 5-amino-4-[(1-ethyl-1,5-dihydro-5-imino-3-methyl-4H-pyrazol-4-ylidene)amino]-2-methyl- (9CI) (CA INDEX NAME)



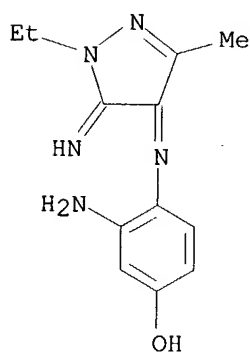
RN 197433-61-7 HCAPLUS  
CN Phenol, 5-amino-4-[(1-ethyl-1,5-dihydro-5-imino-4H-pyrazol-4-

ylidene)amino]-2-methyl- (9CI) (CA INDEX NAME)



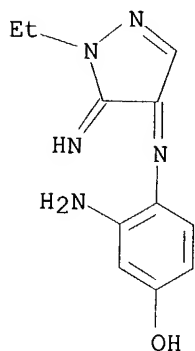
RN 197433-62-8 HCAPLUS

CN Phenol, 3-amino-4-[(1-ethyl-1,5-dihydro-5-imino-3-methyl-4H-pyrazol-4-ylidene)amino]- (9CI) (CA INDEX NAME)



RN 197433-63-9 HCAPLUS

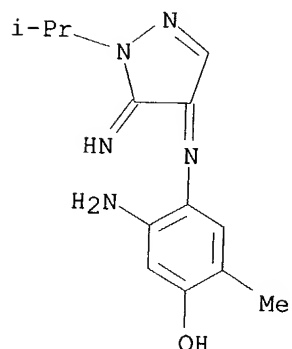
CN Phenol, 3-amino-4-[(1-ethyl-1,5-dihydro-5-imino-4H-pyrazol-4-ylidene)amino]- (9CI) (CA INDEX NAME)



RN 197433-64-0 HCAPLUS

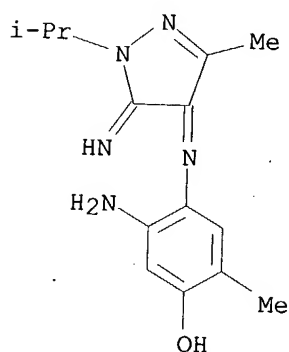


CN Phenol, 5-amino-4-[[1,5-dihydro-5-imino-1-(1-methylethyl)-4H-pyrazol-4-ylidene]amino]-2-methyl- (9CI) (CA INDEX NAME)



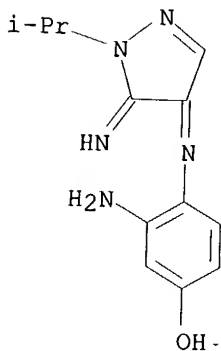
RN 197433-65-1 HCAPLUS

CN Phenol, 5-amino-4-[[1,5-dihydro-5-imino-3-methyl-1-(1-methylethyl)-4H-pyrazol-4-ylidene]amino]-2-methyl- (9CI) (CA INDEX NAME)



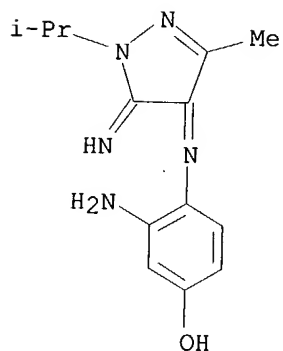
RN 197433-66-2 HCAPLUS

CN Phenol, 3-amino-4-[[1,5-dihydro-5-imino-1-(1-methylethyl)-4H-pyrazol-4-ylidene]amino]- (9CI) (CA INDEX NAME)



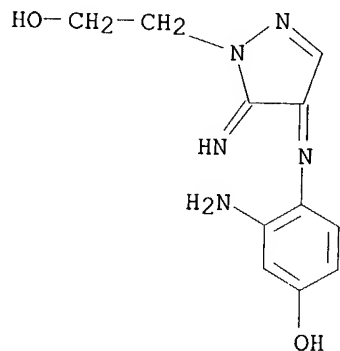
RN 197433-67-3 HCAPLUS

CN Phenol, 3-amino-4-[[1,5-dihydro-5-imino-3-methyl-1-(1-methylethyl)-4H-pyrazol-4-ylidene]amino]- (9CI) (CA INDEX NAME)



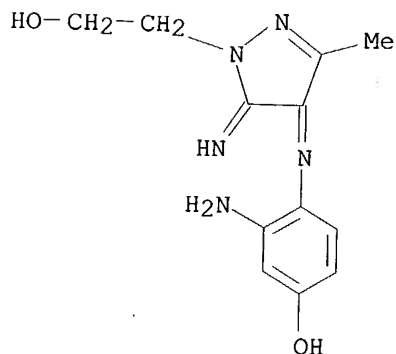
RN 197433-68-4 HCAPLUS

CN 1H-Pyrazole-1-ethanol, 4-[(2-amino-4-hydroxyphenyl)imino]-4,5-dihydro-5-imino- (9CI) (CA INDEX NAME)



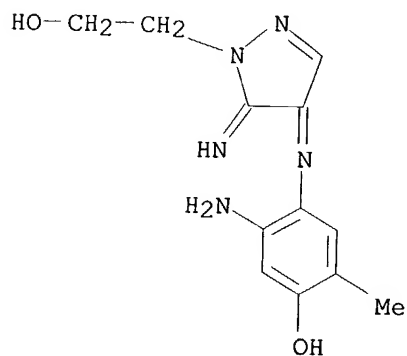
RN 197433-69-5 HCAPLUS

CN 1H-Pyrazole-1-ethanol, 4-[(2-amino-4-hydroxyphenyl)imino]-4,5-dihydro-5-imino-3-methyl- (9CI) (CA INDEX NAME)



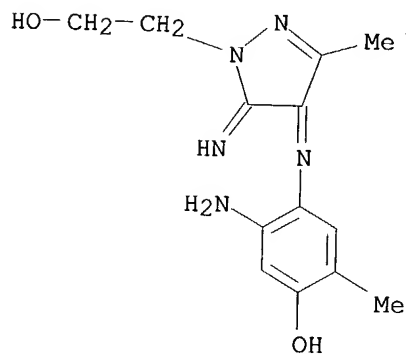
RN 197433-70-8 HCAPLUS

CN 1H-Pyrazole-1-ethanol, 4-[(2-amino-4-hydroxy-5-methylphenyl)imino]-4,5-dihydro-5-imino- (9CI) (CA INDEX NAME)



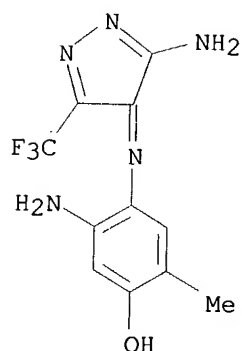
RN 197433-71-9 HCAPLUS

CN 1H-Pyrazole-1-ethanol, 4-[(2-amino-4-hydroxy-5-methylphenyl)imino]-4,5-dihydro-5-imino-3-methyl- (9CI) (CA INDEX NAME)



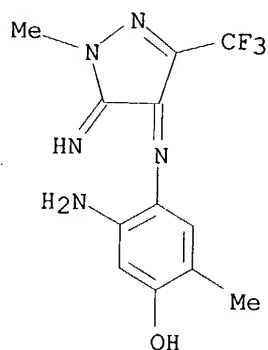
RN 197433-72-0 HCAPLUS

CN Phenol, 5-amino-4-[[3-amino-5-(trifluoromethyl)-4H-pyrazol-4-ylidene]amino]-2-methyl- (9CI) (CA INDEX NAME)



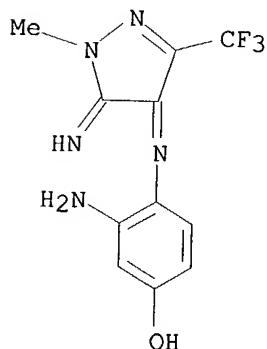
RN 197433-74-2 HCAPLUS

CN Phenol, 5-amino-4-[[1,5-dihydro-5-imino-1-methyl-3-(trifluoromethyl)-4H-pyrazol-4-ylidene]amino]-2-methyl- (9CI) (CA INDEX NAME)



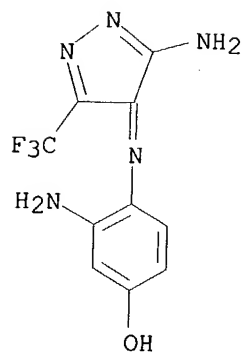
RN 197433-75-3 HCAPLUS

CN Phenol, 3-amino-4-[[1,5-dihydro-5-imino-1-methyl-3-(trifluoromethyl)-4H-pyrazol-4-ylidene]amino]- (9CI) (CA INDEX NAME)



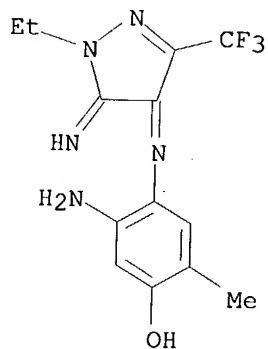
RN 197433-76-4 HCAPLUS

CN Phenol, 3-amino-4-[[3-amino-5-(trifluoromethyl)-4H-pyrazol-4-ylidene]amino]- (9CI) (CA INDEX NAME)



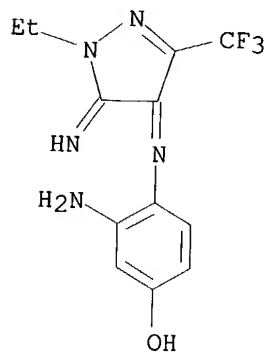
RN 197433-77-5 HCAPLUS

CN Phenol, 5-amino-4-[[1-ethyl-1,5-dihydro-5-imino-3-(trifluoromethyl)-4H-pyrazol-4-ylidene]amino]-2-methyl- (9CI) (CA INDEX NAME)



RN 197433-78-6 HCAPLUS

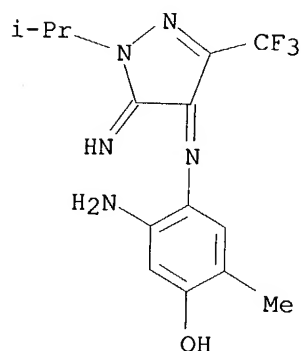
CN Phenol, 3-amino-4-[[1-ethyl-1,5-dihydro-5-imino-3-(trifluoromethyl)-4H-pyrazol-4-ylidene]amino]- (9CI) (CA INDEX NAME)



RN 197433-79-7 HCAPLUS

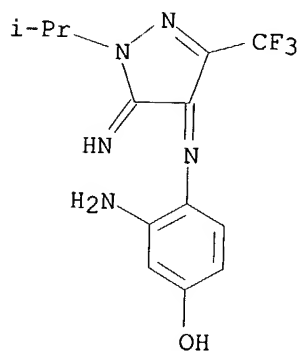
CN Phenol, 5-amino-4-[[1,5-dihydro-5-imino-1-(1-methylethyl)-3-(trifluoromethyl)-4H-pyrazol-4-ylidene]amino]phenol- (9CI) (CA INDEX NAME)

(trifluoromethyl)-4H-pyrazol-4-ylidene]amino]-2-methyl- (9CI) (CA INDEX NAME)



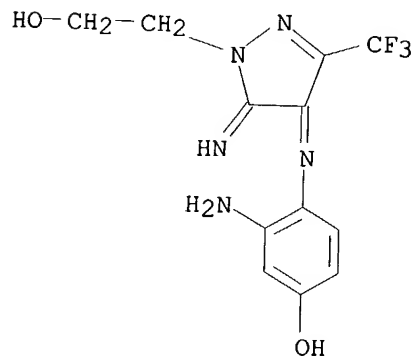
RN 197433-80-0 HCAPLUS

CN Phenol, 3-amino-4-[[1,5-dihydro-5-imino-1-(1-methylethyl)-3-(trifluoromethyl)-4H-pyrazol-4-ylidene]amino]- (9CI) (CA INDEX NAME)

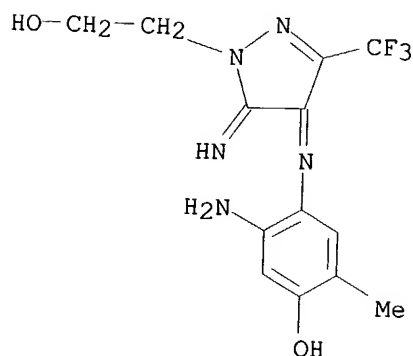


RN 197433-81-1 HCAPLUS

CN 1H-Pyrazole-1-ethanol, 4-[(2-amino-4-hydroxyphenyl)imino]-4,5-dihydro-5-imino-3-(trifluoromethyl)- (9CI) (CA INDEX NAME)



RN 197433-82-2 HCAPLUS  
 CN 1H-Pyrazole-1-ethanol, 4-[(2-amino-4-hydroxy-5-methylphenyl)imino]-4,5-dihydro-5-imino-3-(trifluoromethyl)- (9CI) (CA INDEX NAME)



L84 ANSWER 28 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1997:324068 HCAPLUS  
 DN 126:297464  
 TI Oxidative hair dye compositions containing a substance p antagonist and a strontium salt  
 IN De Lachararriere, Olivier; Breton, Lionel; Loussouarn, Genevieve  
 PA Oreal S. A., Fr.  
 SO Eur. Pat. Appl., 10 pp.  
 CODEN: EPXXDW

DT Patent  
 LA French

FAN.CNT 1

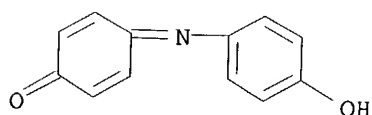
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	FR 2738741	A1	19970321	FR 1995-10979	19950919
	FR 2738741	B1	19971205		
	WO 9710797	A1	19970327	WO 1996-FR1316	19960823
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	JP 09110658	A2	19970428	JP 1996-245241	19960917
	JP 3025446	B2	20000327		
	CA 2185933	AA	19970320	CA 1996-2185933	19960918
	US 5858024	A	19990112	US 1996-716534	19960919
PRAI	FR 1995-10979	A	19950919		
	WO 1996-FR1316	W	19960823		

AB Oxidative hair dye compns. containing a substance p antagonist and a strontium salt for decreasing or elimination of the irritant effects of dyes and pigments are claimed. A hair dye composition contained paraphenylenediamine 0.4, 4-hydroxyindole 0.1, resorcin 0.3, strontium chloride 5, ethoxylated oleyl alc. 4, 78% polyglycerol oleyl alc. 5.69, oleic acid 3, Ethomeen-012 7, sodium di-Et aminopropyl laurylamino-suxinamate 3, oleic alc. 5, oleic acid diethanolamide 12, propylene glycol 3.5, Et alc. 7, dipropylene glycol 0.5, propylene glycol monomethyl ether 9, 35% sodium metabisulfite 0.455, ammonium acetate 0.8, antioxidants q.s. fragrance and preservative

- q.s., 20% ammonium solution 10, and water q.s. 100%.
- IC ICM A61K007-00
  - ICS A61K007-13; A61K007-48
  - CC 62-3 (Essential Oils and Cosmetics)
  - ST oxidative hair dye substance p antagonist; strontium salt oxidative hair dye
  - IT Dyes
    - (acid; oxidative hair dye compns. containing substance p antagonist and strontium salt)
  - IT Heterocyclic compounds
    - RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
    - (aminoaza; oxidative hair dye compns. containing substance p antagonist and strontium salt)
  - IT Hair preparations
    - (dyes, oxidative; oxidative hair dye compns. containing substance p antagonist and strontium salt)
  - IT Spiro compounds
    - Spiro compounds
    - RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
    - (lactams; oxidative hair dye compns. containing substance p antagonist and strontium salt)
  - IT Solvents
    - RL: NUU (Other use, unclassified); USES (Uses)
    - (organic; oxidative hair dye compns. containing substance p antagonist and strontium salt)
  - IT Coupling agents
    - Iris pallida
    - (oxidative hair dye compns. containing substance p antagonist and strontium salt)
  - IT Anthraquinone dyes
    - Borates
    - Carbonates, biological studies
    - Chlorides, biological studies
    - Hydroxides (inorganic)
    - Iridaceae
    - Nitrates, biological studies
    - Peptides, biological studies
    - Pigments, nonbiological
    - Sulfates, biological studies
    - RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
    - (oxidative hair dye compns. containing substance p antagonist and strontium salt)
  - IT Amino acids, biological studies
    - RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
    - (salts; oxidative hair dye compns. containing substance p antagonist and strontium salt)
  - IT Lactams
    - Lactams
    - RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
    - (spiro; oxidative hair dye compns. containing substance p antagonist and strontium salt)
  - IT 33507-63-0, Substance p
    - RL: BSU (Biological study, unclassified); BIOL (Biological study)
    - (antagonists; oxidative hair dye compns. containing substance p antagonist

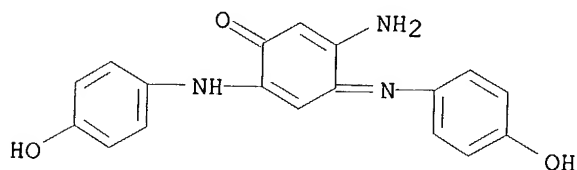


- and strontium salt)
- IT 71-50-1, Acetate, biological studies 100-76-5D, Quinuclidine, derivs. 106-50-3, 1,4-Benzenediamine, biological studies 108-46-3, 1,3-Benzenediol, biological studies 110-89-4D, Piperidine, derivs., biological studies 123-75-1D, Pyrrolidine, amino derivs., biological studies 270-68-8D, Isoindole, derivs. 500-85-6D, Indophenol, derivs. 537-65-5D, Indamine, derivs. 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 3131-52-0, 5,6-Dihydroxyindole 6245-87-0D, Indoaniline, derivs. 10476-85-4, Strontium chloride 129176-97-2, Spantide ii
- RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
- (oxidative hair dye compns. containing substance p antagonist and strontium salt)
- IT 500-85-6D, Indophenol, derivs.
- RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
- (oxidative hair dye compns. containing substance p antagonist and strontium salt)
- RN 500-85-6 HCAPLUS
- CN 2,5-Cyclohexadien-1-one, 4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX NAME)

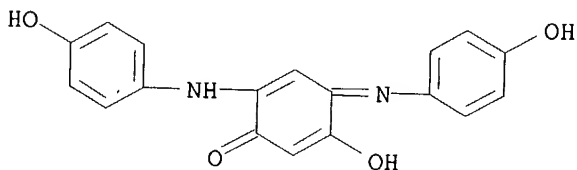


- L84 ANSWER 29 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN
- AN 1995:1007402 HCAPLUS
- DN 124:59077
- TI "Trinuclei." Structure determination by 1H, 13C, and 15N NMR
- AU Bonnet, A.; Barre, G.; Gilard, P.
- CS Laboratories Recherche Avancee, L'Oreal, Aulnay-sous-Bois, 93600, Fr.
- SO Journal de Chimie Physique et de Physico-Chimie Biologique (1995), 92(10), 1823-8
- CODEN: JCPBAN; ISSN: 0021-7689
- PB Elsevier
- DT Journal
- LA French
- AB Oxidative hair dyeing generally involves a "base" and a "coupler" to give an indoaniline or an indophenol. In certain cases, further reaction of the indo-dye results in the formation of a tri-nuclear compound called "Trinucleus". The structures of seven of these compds. have been determined by means of 1H, 13C, and 15N NMR including two-dimensional 1H-13C and 1H-15N heteronuclear correlated techniques. It has been shown that these compds. exist with a benzoquinone imine structure as the central ring. Tautomeric forms may be observed when the "coupler" is resorcinol.
- CC 41-8 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
- Section cross-reference(s): 62
- ST benzoquinone imine trinuclear hair dye
- IT Dyes
- (structure determination of oxidatively coupled hair dye products by NMR)
- IT Tautomerism and Tautomers
- (enamino ketone-enolimine, structure determination of oxidatively coupled hair

dye products by NMR)  
 IT 36100-61-5 41137-96-6 **69620-25-3** 172228-78-3  
**172228-79-4** 172228-80-7 172228-81-8  
 RL: PRP (Properties)  
 (structure determination of oxidatively coupled **hair** dye products by NMR)  
 IT **69620-25-3** **172228-79-4**  
 RL: PRP (Properties)  
 (structure determination of oxidatively coupled **hair** dye products by NMR)  
 RN 69620-25-3 HCAPLUS  
 CN 2,5-Cyclohexadien-1-one, 5-amino-2-[(4-hydroxyphenyl)amino]-4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX NAME)



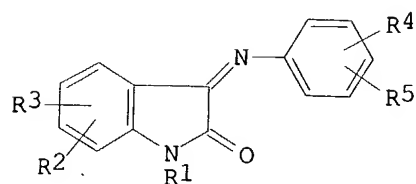
RN 172228-79-4 HCAPLUS  
 CN 2,5-Cyclohexadien-1-one, 5-hydroxy-2-[(4-hydroxyphenyl)amino]-4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX NAME)



L84 ANSWER 30 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1990:617781 HCAPLUS  
 DN 113:217781  
 TI Preparation of 3-aryliminoindolin-2-one hair dyes  
 IN Anderson, James S.; Schultz, Thomas M.  
 PA Bristol-Myers Co., USA  
 SO Eur. Pat. Appl., 9 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

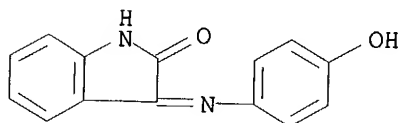
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 359465	A2	19900321	EP 1989-309007	19890906
	EP 359465	A3	19901227		
	EP 359465	B1	19931118		
	R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
	US 4921503	A	19900501	US 1988-243525	19880912
	CA 1327938	A1	19940322	CA 1988-583086	19881115
	JP 02104778	A2	19900417	JP 1989-234827	19890912
	JP 2929203	B2	19990803		
PRAI	US 1988-243525		19880912		

OS MARPAT 113:217781  
GI

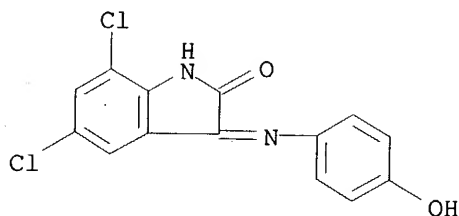


I

- AB The title compds. I [R1 = H, alkyl, Ac, Bz, Ph; R2, R3 = H, alkyl, OH, NH2, halo, NO2, etc.; R4, R5 = H, halo, alkyl, (un)substituted Ph, etc.] are hair dyes. I may be prepared in situ from the corresponding isatins and anilines. A solution of 1 g isatin and 1 g p-phenylenediamine in 30 mL EtOH and 70 mL H2O was applied to hair for 20 min, to produce a red color. I (11) were prepared as usual.
- IC ICM A61K007-13
- CC 62-3 (Essential Oils and Cosmetics)  
Section cross-reference(s): 27
- ST aryliminoindolinone prepn hair dye; indolinone arylimino hair dye; isatin aniline deriv hair dye
- IT Hair preparations  
(dyes, aryliminoindolinones)
- IT 29775-73-3P 33828-98-7P 33829-07-1P **42407-83-0P**  
57743-35-8P 78662-39-2P 100108-81-4P 130582-65-9P 130582-66-0P  
130582-67-1P **130582-68-2P**  
RL: BIOL (Biological study); PREP (Preparation)  
(preparation of, as **hair** dye)
- IT 91-56-5, Isatin  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with arylamines)
- IT 99-98-9, 4-Dimethylaminoaniline 101-54-2, 4-Aminodiphenylamine  
106-50-3, 1,4-Benzenediamine, reactions 123-30-8 7575-35-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with isatin, in situ, hair dye by)
- IT **42407-83-0P 130582-68-2P**  
RL: BIOL (Biological study); PREP (Preparation)  
(preparation of, as **hair** dye)
- RN 42407-83-0 HCAPLUS
- CN 2H-Indol-2-one, 1,3-dihydro-3-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX NAME)

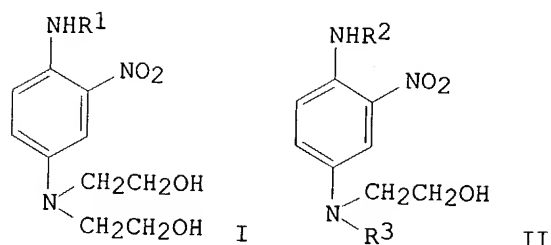


- RN 130582-68-2 HCAPLUS
- CN 2H-Indol-2-one, 5,7-dichloro-1,3-dihydro-3-[(4-hydroxyphenyl)imino]- (9CI)  
(CA INDEX NAME)



L84 ANSWER 31 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1986:520486 HCAPLUS  
 DN 105:120486  
 TI Hair dyes containing 2-nitro-p-phenylene diamine  
 IN Grollier, Jean Francois; Cotteret, Jean; Junino, Alex; Genet, Alain  
 PA Oreal S. A. , Fr.  
 SO Ger. Offen., 26 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3534369	A1	19860403	DE 1985-3534369	19850926
	DE 3534369	C2	19910103		
	FR 2570600	A1	19860328	FR 1985-13243	19850906
	FR 2570600	B1	19881230		
	CA 1253082	A1	19890425	CA 1985-491125	19850919
	AT 8502765	A	19910215	AT 1985-2765	19850923
	AT 393220	B	19910910		
	AU 8547908	A1	19860410	AU 1985-47908	19850924
	AU 576898	B2	19880908		
	DK 8504339	A	19860328	DK 1985-4339	19850925
	DK 164635	B	19920727		
	DK 164635	C	19921214		
	NL 8502619	A	19860416	NL 1985-2619	19850925
	NL 192248	B	19961202		
	NL 192248	C	19970403		
	BR 8504753	A	19860722	BR 1985-4753	19850926
	US 4690685	A	19870901	US 1985-780606	19850926
	CH 667385	A	19881014	CH 1985-4174	19850926
	BE 903333	A1	19860327	BE 1985-215648	19850927
	GB 2164959	A1	19860403	GB 1985-23819	19850927
	GB 2164959	B2	19880427		
	ZA 8507487	A	19860625	ZA 1985-7487	19850927
	JP 61171768	A2	19860802	JP 1985-212720	19850927
	JP 03009085	B4	19910207		
PRAI	LU 1984-85557		19840927		
GI					



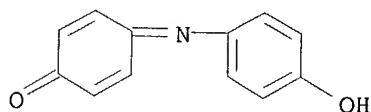
- AB Hair dyes comprise direct nitrodyes I (R1 = C1-3 alkyl, CH<sub>2</sub>CH<sub>2</sub>OH) and II (R2 = C2-3 hydroxyalkyl, R3 = C2-3 ω-hydroxyalkyl). II enhances solubilities of I by cosolubilization phenomena. The preparation imparts intensive and very dark nuance. Thus, 3-amino-1-propanol was reacted with 4-fluoro-3-nitro-N,N-bis-(β-hydroxyethyl)aniline to give II (R2 = γ-hydroxypropyl, R3 = CH<sub>2</sub>CH<sub>2</sub>OH) (III). A hair dye was formulated containing I (R1 = Me) 1.4, III.HCl 2.1, 1-nitro-2-amino-3-hydroxybenzene 0.4, 3-(N-methylamino-4-nitro)phenyl-β,γ-dihydroxypropyl ether 0.6, 1-N-(β-hydroxyethyl)-2-nitro-4-aminobenzene 0.45, 1-N-(β-hydroxyethyl)-2-nitro-4-hydroxybenzene 0.3, [4-N-(β-hydroxyethyl)amino-2-nitro]phenoxyethanol 0.3, lauryl diethanolamide 3, lauric acid 1.5, nonylphenol with 9 mol ethyleneoxide 3.5, 2-butoxyethanol 5, hydroxyethyl cellulose 0.13, 2-amino-2-methyl-1-propanol q.s. to pH = 9.5 and water to 100 g. The preparation dyed hairs dark brown.
- IC ICM A61K007-13  
ICS C09B051-00; D06P001-19
- CC 62-3 (Essential Oils and Cosmetics)
- ST hair dye nitrophenylenediamine
- IT Hair preparations  
(dyes, nitrophenylenediamines in)
- IT 627-30-5  
RL: BIOL (Biological study)  
(condensation of, with aminoaniline derivative)
- IT 29705-38-2  
RL: BIOL (Biological study)  
(condensation of, with aminopropanol)
- IT 84041-77-0  
RL: BIOL (Biological study)  
(condensation of, with chloropropanol)
- IT 78-96-6 156-87-6  
RL: BIOL (Biological study)  
(condensation of, with fluoroaniline)
- IT 2784-94-3 33229-34-4 104226-24-6 104226-25-7  
RL: BIOL (Biological study)  
(hair dyes containing)
- IT 95-54-5D, derivs. 95-55-6D, derivs. 106-50-3D, derivs. 108-45-2D, derivs. 108-46-3D, derivs. 123-30-8D, derivs. 500-85-6D, derivs. 537-65-5D, derivs. 591-27-5D, derivs. 6245-87-0D, derivs.  
RL: BIOL (Biological study)  
(hair dyes containing nitrophenylenediamines and)
- IT 104226-19-9P 104226-26-8P 104226-27-9P 104226-28-0P 104226-29-1P  
104226-30-4P  
RL: BIOL (Biological study); PREP (Preparation)  
(preparation of, as hair dye)
- IT 500-85-6D, derivs.

RL: BIOL (Biological study)

(hair dyes containing nitrophenylenediamines and)

RN 500-85-6 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX NAME)



L84 ANSWER 32 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1985:137582 HCAPLUS

DN 102:137582

TI Dyes for keratin fibers

IN Grollier, Jean Francois

PA Oreal S. A. , Fr.

SO Ger. Offen., 25 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

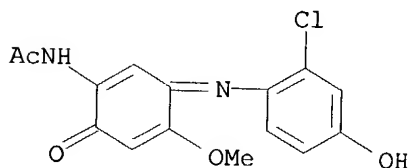
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3423349	A1	19850110	DE 1984-3423349	19840625
	DE 3423349	C2	19940811		
	AT 8402018	A	19910215	AT 1984-2018	19840620
	AT 393218	B	19910910		
	NL 8401990	A	19850116	NL 1984-1990	19840622
	CA 1222208	A1	19870526	CA 1984-457315	19840622
	BE 900007	A1	19841227	BE 1984-213212	19840626
	GB 2142348	A1	19850116	GB 1984-16246	19840626
	FR 2548895	A1	19850118	FR 1984-10078	19840626
	FR 2548895	B1	19871113		
	JP 60019712	A2	19850131	JP 1984-131821	19840626
	JP 05021086	B4	19930323		
	CH 659582	A	19870213	CH 1984-3127	19840627
	US 4834768	A	19890530	US 1987-133172	19871211
PRAI	LU 1983-84875		19830627		
	US 1984-624254		19840625		
	US 1986-873449		19860606		

AB Keratin fibers, especially hair, are colored with a mixture of direct dyes and xanthan gum [11138-66-2] in a suitable surfactant-containing vehicle. The direct dyes may be nitrobenzene, arylmethane, indoamine, xanthene, acridene, azine, azo, or anthraquinone compds. The xanthan gum thickens the dye preparation so that it does not run or liquefy at high temperature or with pH

change. Thus, a coloring shampoo gel contained: 2-amino-5-(N- $\beta$ -hydroxyethylamino)nitrobenzene [24905-87-1] 0.30, 2-amino-5-(N-methylamino)nitrobenzene [95576-84-4] 1.10, 2-amino-3-methylnitrobenzene [570-24-1] 0.6, 3-hydroxy-4-(N- $\beta$ -hydroxyethylamino)nitrobenzene [95576-85-5] 0.1, Basic Blue 26 [2580-56-5] 0.05, lauric acid diethanolamide 4, Sactipon 286 20, Kathon CG 0.05, xanthan gum 1, dilute NaOH to pH 8, and H<sub>2</sub>O to 100 g. Dark chestnut-brown hair treated with the preparation for 30 min, rinsed, and dried had an intense auburn shimmer.

IC ICM A61K007-13

ICS C09B067-00; D06P003-14  
 CC 62-3 (Essential Oils and Cosmetics)  
 ST xanthan gum hair dye gel; direct hair dye gel; nitrobenzene deriv hair dye gel  
 IT Thickening agents  
 (xanthan gum, for direct hair dyes)  
 IT Hair preparations  
 (dyes, direct, gels, xanthan gum thickener for)  
 IT 11138-66-2  
 RL: BIOL (Biological study)  
 (hair dye gels containing)  
 IT 65-61-2 81-88-9 121-88-0 128-95-0 130-22-3 477-73-6 548-62-9  
 570-24-1 603-85-0 610-81-1 2475-45-8 2580-56-5 2784-94-3  
 6441-93-6 10228-03-2 16292-90-3 20721-50-0 24905-87-1 33229-34-4  
 38866-20-5 59820-63-2 65235-31-6 68391-30-0 81612-54-6  
 84041-77-0 85765-48-6 86419-68-3 95576-84-4 95576-85-5  
 95576-86-6 95576-87-7 **95576-88-8**  
 RL: BIOL (Biological study)  
 (hair dye gels containing xanthan gum and)  
 IT **95576-88-8**  
 RL: BIOL (Biological study)  
 (hair dye gels containing xanthan gum and)  
 RN 95576-88-8 HCAPLUS  
 CN Acetamide, N-[3-[(2-chloro-4-hydroxyphenyl)imino]-4-methoxy-6-oxo-1,4-cyclohexadien-1-yl]- (9CI) (CA INDEX NAME)



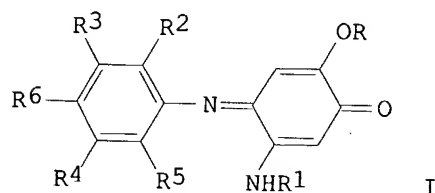
L84 ANSWER 33 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1985:80293 HCAPLUS  
 DN 102:80293  
 TI Indoanilines and indophenols and hair dye containing these compounds  
 IN Bugaut, Andree; Junino, Alex  
 PA Oreal S. A. , Fr.  
 SO Ger. Offen., 40 pp.  
 CODEN: GWXXBX

DT Patent  
 LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3421812	A1	19841213	DE 1984-3421812	19840612
	DE 3421812	C2	19940120		
	FR 2547301	A1	19841214	FR 1983-9735	19830613
	FR 2547301	B1	19850816		
	GB 2141437	A1	19841219	GB 1984-14913	19840612
	GB 2141437	B2	19870318		
	CH 661277	A	19870715	CH 1984-2843	19840612
	CA 1238645	A1	19880628	CA 1984-456378	19840612
	BE 899894	A1	19841213	BE 1984-213122	19840613
	JP 60008249	A2	19850117	JP 1984-120052	19840613

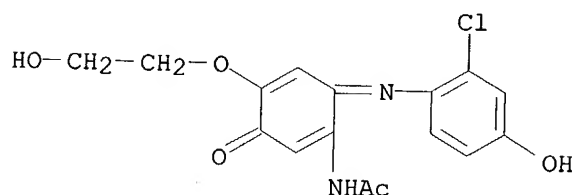
US 4702863 A 19871027 US 1986-884904 19860714  
 PRAI FR 1983-9735 19830613  
 US 1984-618336 19840607  
 GI



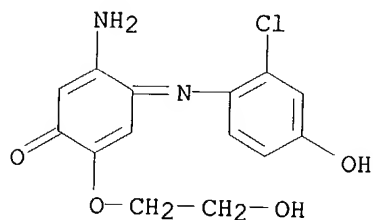
- AB p-Phenylenediamines or p-aminophenols are oxidatively coupled with 2,5-RO(R1NH)C6H3OH [R = amino- or OH-substituted C1-6 alkyl; R1 = H, (un)substituted alkyl, acyl, carbalkoxy, carbamoyl] to give direct hair dyes which have the structure I [R, R1 as described; R2-R5 = H, halogen, C≤6 alkyl, hydroxyalkyl, alkoxy, hydroxyalkoxy; R6 = HO or (un)substituted amino] and exhibit good fastness, especially good solubility in aqueous alc., and low mutagenicity. Thus, addition of (NH4)2S2O8 and p-C6H4(NH2)2·2HCl [624-18-0] to a mixture of ice and 2,4-HO(AcNH)C6H3OCH2CH2OH [94789-80-7] dissolved in iso-PrOH and NH4OH gave I (R = CH2CH2OH, R1 = Ac, R2-R5 = H, R6 = H2N) (II) [94789-79-4]. Deacetylation of II gave the corresponding amino compound (III) [94789-81-8]. Twelve other I were similarly prepared Formulations containing II or III produced gray and red dyeings, resp., on bleached hair. Formulations containing other I and their application to hair are also described.
- IC C09B053-02; A61K007-13; D06P003-14; A61K007-09
- CC 41-8 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
- ST Section cross-reference(s): 62
- IT indoaniline hair dye; indophenol hair dye; hair dye indoaniline indophenol; hydroxyalkoxy indoaniline indophenol dye
- IT Hair preparations (dyes, indoanilines and indophenols for)
- IT 3590-52-1
- RL: USES (Uses)
- (condensation of, with (acetamidohydroxyphenoxy)ethanol)
- IT 94789-64-7P **94789-67-0P** 94789-76-1P 94789-79-4P
- RL: PREP (Preparation)
- (hair dye, manufacture and deacetylation and use of)
- IT 94789-66-9P **94789-68-1P** **94789-69-2P** 94789-70-5P
- 94789-71-6P 94789-73-8P 94789-75-0P 94789-77-2P 94789-78-3P
- 94789-81-8P
- RL: PREP (Preparation)
- (hair dye, manufacture and use of)
- IT 615-45-2 624-18-0 17609-80-2
- RL: RCT (Reactant); RACT (Reactant or reagent)
- (oxidative coupling of, with (acetamidohydroxyphenoxy)ethanol)
- IT 123-30-8 56496-89-0 61702-44-1 94789-74-9
- RL: RCT (Reactant); RACT (Reactant or reagent)
- (oxidative coupling of, with (acetamidohydroxyphenoxy)propanediol)
- IT 7207-32-1
- RL: RCT (Reactant); RACT (Reactant or reagent)



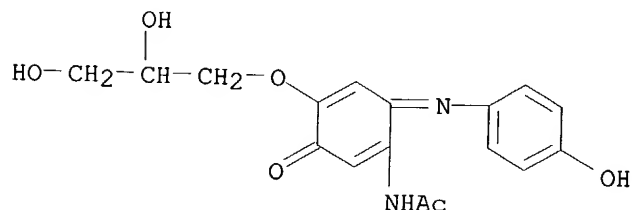
- (oxidative coupling of, with phenol derivative)  
 IT 94789-65-8 94789-80-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (oxidative coupling of, with phenylenediamine)  
 IT 94789-72-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (oxidative coupling of, with phenylenediamine derivative)  
 IT **94789-67-0P**  
 RL: PREP (Preparation)  
 (hair dye, manufacture and deacetylation and use of)  
 RN 94789-67-0 HCAPLUS  
 CN Acetamide, N-[6-[(2-chloro-4-hydroxyphenyl)imino]-4-(2-hydroxyethoxy)-3-oxo-1,4-cyclohexadien-1-yl]- (9CI) (CA INDEX NAME)



- IT **94789-68-1P 94789-69-2P**  
 RL: PREP (Preparation)  
 (hair dye, manufacture and use of)  
 RN 94789-68-1 HCAPLUS  
 CN 2,5-Cyclohexadien-1-one, 5-amino-4-[(2-chloro-4-hydroxyphenyl)imino]-2-(2-hydroxyethoxy)- (9CI) (CA INDEX NAME)



- RN 94789-69-2 HCAPLUS  
 CN Acetamide, N-[4-(2,3-dihydroxypropoxy)-6-[(4-hydroxyphenyl)imino]-3-oxo-1,4-cyclohexadien-1-yl]- (9CI) (CA INDEX NAME)

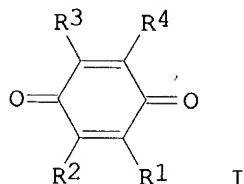


DN 99:58732  
 TI Benzoquinone derivatives for direct hair dyes  
 IN Lang, Gerard; Malaval, Alain; Grollier, Jean Francois; Rosenbaum, Georges  
 PA Oreal S. A. , Fr.  
 SO Ger. Offen., 25 pp.  
 CODEN: GWXXBX

DT Patent  
 LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3244454	A1	19830609	DE 1982-3244454	19821201
	DE 3244454	C2	19900201		
	FR 2517200	A1	19830603	FR 1982-20009	19821129
	FR 2517200	B1	19850412		
	GB 2110722	A1	19830622	GB 1982-34178	19821201
	GB 2110722	B2	19850807		
	JP 58109406	A2	19830629	JP 1982-211212	19821201
	JP 02006324	B4	19900208		
	CH 655439	A	19860430	CH 1982-6992	19821201
	BE 895224	A1	19830602	BE 1982-209630	19821202
	CA 1180283	A1	19850101	CA 1982-416878	19821202
	US 4867751	A	19890919	US 1984-682475	19841217
PRAI	LU 1981-83807		19811202		
	US 1982-445967		19821201		
GI					



AB Benzoquinones (I; where R1 and R3 = H, OH, alkoxy, or hydroxyalkyl and R2 and R4 = H, OH, alkoxy, alkyl, or Ph, etc.), are useful as hair direct dyes suitable for formulating as creams, gels, oils, etc. A cream was prepared containing 2,3,5,6-tetrahydroxy-1,4-benzoquinone [319-89-1] 0.3, cetyl

alc. 17.0, Mertigal CS 15 E 6.0, and oleyl alc. 3.0 g; citric acid was added to pH 2.3 and distilled water to 100 g. When applied to light-brown hair for 30 min followed by washing and drying, the hair had a coppery gold tone.

IC A61K007-13

CC 62-3 (Essential Oils and Cosmetics)

ST benzoquinone hair dye

IT Hair preparations

(dyes, direct, benzoquinones for)

IT 83-72-7 85-23-4 106-51-4, biological studies 106-51-4D, derivs.  
 319-89-1 484-89-9 490-91-5 519-67-5 527-61-7 548-59-4 605-94-7  
 615-94-1 825-33-2 1760-67-4 2188-79-6 2207-58-1 2446-75-5  
 2880-58-2 4502-01-6 62267-71-4 86516-11-2 **86516-12-3**

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(hair direct dye compns. containing)

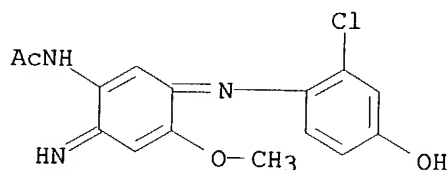
IT 86516-12-3

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(hair direct dye compns. containing)

RN 86516-12-3 HCAPLUS

CN Acetamide, N-[3-[(2-chloro-4-hydroxyphenyl)imino]-6-imino-4-methoxy-1,4-cyclohexadien-1-yl]- (9CI) (CA INDEX NAME)



L84 ANSWER 35 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1982:603088 HCAPLUS

DN 97:203088

TI Cutaneous penetration of some hairdyes in the hairless rat

AU Tsomi, V.; Kalopissis, G.

CS Lab. Rech., Soc. Oreal, Aulnay Sous Bois, 93601, Fr.

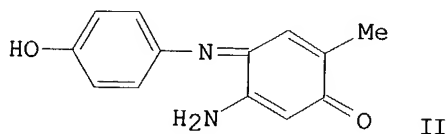
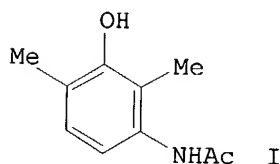
SO Toxicological European Research (1982), 4(3), 119-27

CODEN: TOERD9; ISSN: 0249-6402

DT Journal

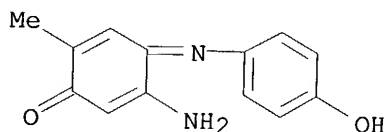
LA English

GI

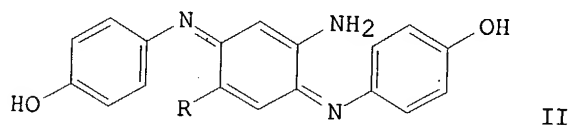


AB The cutaneous penetration of certain number of oxidation dyestuffs for hair [p-aminophenol [123-30-8], 2,4-diaminoanisole [615-05-4], 2,4-diaminophenoxyethanol [70643-19-5], resorcinol [108-46-3], 3-acetyl-2,6-dimethylphenol (I) [28739-71-1] and the indamine N-(4-hydroxyphenyl)-3-amino-6-methylbenzoquinoneimine (II) [30749-78-1]], either alone or when formulated with other dyestuffs, and under various exptl. conditions, was evaluated in the hairless rat using C14 labeled mols. Dyestuffs having indamine structures, formed by oxidation of their precursors (bases, couplers), for all practical purposes do not cross the cutaneous barrier. No fixation of those dyestuffs investigated (resorcinol, 2,4-diaminoanisole, 2,4-diaminophenoxyethanol) which do pass through the cutaneous barrier is found in either liver or thyroid of the exptl. animals, 4 days after their topical application. The amount of I which penetrates the cutaneous barrier is constant for quantities of hair dye solution  $\geq 20$  mg/cm<sup>2</sup> of skin. The type and composition of the excipient used in the formulation of hair dyes plays an important role in their penetration.

CC 62-3 (Essential Oils and Cosmetics)  
 Section cross-reference(s): 4  
 ST hair dye skin penetration  
 IT Skin, metabolism  
 (hair dyes penetration in)  
 IT Hair preparations  
 (dyes, penetration of, through skin)  
 IT 108-46-3, biological studies 123-30-8 615-05-4 28739-71-1  
 30749-78-1 70643-19-5  
 RL: BIOL (Biological study)  
 (hair dye material, cutaneous penetration of)  
 IT 30749-78-1  
 RL: BIOL (Biological study)  
 (hair dye material, cutaneous penetration of)  
 RN 30749-78-1 HCAPLUS  
 CN 2,5-Cyclohexadien-1-one, 5-amino-4-[(4-hydroxyphenyl)imino]-2-methyl-  
 (9CI) (CA INDEX NAME)



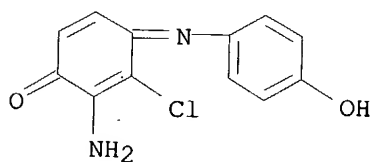
L84 ANSWER 36 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1979:616661 HCAPLUS  
 DN 91:216661  
 TI The role of meta difunctional benzene derivatives in oxidative hair  
 dyeing. II. Reactions with p-aminophenols  
 AU Brown, Keith C.; Corbett, John F.  
 CS Clairol Res. Lab., Stamford, CT, 06902, USA  
 SO Journal of the Society of Cosmetic Chemists (1979), 30(4), 191-211  
 CODEN: JSCCA5; ISSN: 0037-9832  
 DT Journal  
 LA English  
 GI



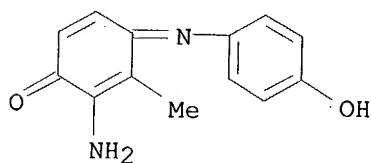
AB In oxidative dyeing, oxidation of p-aminophenols to p-benzoquinone monoimines is the 1st step in color formation. The monoimines react as a free base at pH >8. Coupling of neutral monoimines with meta difunctional benzene couplers as the free bases or anions results in the formation of leucoindoxyls which undergo rapid oxidation to highly colored indo dyes. Oxidation of mixts. containing both p-aminophenol (I) [123-30-8] and p-phenylenediamine [106-50-3] results in preferential oxidation of I. In the absence of couplers, the resulting monoimine reacts with both unoxidized I and with p-phenylenediamine to give analogs (II, R = OH and CH2) of Bandrowski's base. In the presence of couplers, these latter reactions are suppressed and reaction occurs preferentially with the coupler. The reactivity of

- couplers towards monoimines is in the order resorcinol [108-46-3] > 4-amino-2-hydroxytoluene [2835-95-2] > 2,4-diaminoanisole [615-05-4] > m-aminophenol [591-27-5]. Thus, inclusion of p-aminophenols in oxidation dye formulations contributes significantly to the color produced on hair and the resultant dyes have comparable stability to those formed from p-phenylenediamine.
- CC 62-3 (Essential Oils and Cosmetics)  
Section cross-reference(s): 22, 25, 40
- ST oxidn hair dye amino phenol; meta difunctional benzene hair dye
- IT Oxidation  
(of aminophenols, in hair dye preparation)
- IT Kinetics of coupling reaction  
(of imines, with aminophenols, in hair dye preparation)
- IT Kinetics of hydrolysis  
(of indophenol oxidative hair dyes)
- IT Ultraviolet and visible spectra  
(substituent effect on reactivity and, of aminophenols, in hair dye preparation)
- IT Hair preparations  
(dyes, oxidative, aminophenols reactions with coupling agents in relation to)
- IT 95-80-7 106-50-3, reactions 108-45-2, reactions 615-05-4 823-40-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling reaction of, in oxidative hair dye formation)
- IT 2835-99-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling reaction of, with aminophenolate, in oxidative hair dye formation)
- IT 95-88-5 496-73-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling reaction of, with aminophenols)
- IT 6358-06-1 53222-92-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling reaction of, with monoimines, and oxidative hair dye formation)
- IT 108-46-3, biological studies 591-27-5 2835-95-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling reactions of, in hair dye formation)
- IT 72083-93-3 72083-94-4 72083-95-5  
72083-96-6  
RL: PRP (Properties)  
(cyclization and hydrolytic kinetics of, hair dye formation in relation to)
- IT 24093-25-2P 71198-55-5P  
RL: PRP (Properties); PREP (Preparation)  
(formation and decomposition kinetics of, hair dye formation in relation to)
- IT 3009-34-5P  
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(formation and hydrolysis of)
- IT 106-51-4P, preparation  
RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, by hydrolysis of benzoquinone imine)
- IT 71082-02-5P  
RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, in hair dye prepns.)
- IT 72083-92-2P  
RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, in oxidative hair dye formation)

IT 500-85-6P 2582-41-4P 2701-88-4P  
 24093-23-0P 24093-25-2P 30127-99-2P  
 30128-00-8P 52200-93-8P 72083-78-4P  
 72083-79-5P 72083-80-8P 72083-81-9P  
 72083-82-0P 72083-83-1P 72083-84-2P  
 72083-85-3P 72083-86-4P 72083-87-5P  
 72083-88-6P 72083-89-7P 72083-90-0P  
 72083-91-1P  
 RL: FORM (Formation, nonpreparative); PREP (Preparation)  
 (formation of, in oxidative hair dyeing)  
 IT 31679-92-2P  
 RL: PREP (Preparation)  
 (preparation of)  
 IT 2835-96-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with chlororesorcinol)  
 IT 95-87-4  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with methylbenzoquinone monoimine)  
 IT 4370-76-7 30168-96-8 30168-97-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with phenolate)  
 IT 4370-75-6  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with xylenol)  
 IT 123-30-8  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reactions of, in oxidative hair dyeing)  
 IT 72083-93-3 72083-94-4 72083-95-5  
 72083-96-6  
 RL: PRP (Properties)  
 (cyclization and hydrolytic kinetics of, hair dye formation  
 in relation to)  
 RN 72083-93-3 HCAPLUS  
 CN 2,5-Cyclohexadien-1-one, 2-amino-3-chloro-4-[(4-hydroxyphenyl)imino]-  
 (9CI) (CA INDEX NAME)

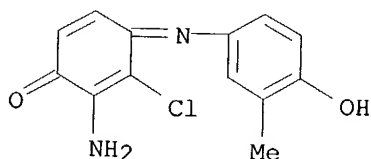


RN 72083-94-4 HCAPLUS  
 CN 2,5-Cyclohexadien-1-one, 2-amino-4-[(4-hydroxyphenyl)imino]-3-methyl-  
 (9CI) (CA INDEX NAME)



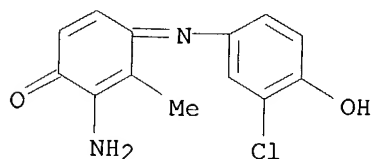
RN 72083-95-5 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 2-amino-3-chloro-4-[(4-hydroxy-3-methylphenyl)imino]- (9CI) (CA INDEX NAME)



RN 72083-96-6 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 2-amino-4-[(3-chloro-4-hydroxyphenyl)imino]-3-methyl- (9CI) (CA INDEX NAME)

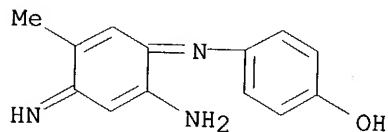


IT 24093-25-2P 71198-55-5P

RL: PRP (Properties); PREP (Preparation)  
(formation and decomposition kinetics of, **hair** dye formation in relation to)

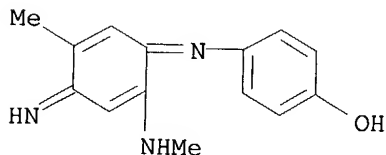
RN 24093-25-2 HCAPLUS

CN Phenol, 4-[(2-amino-4-imino-5-methyl-2,5-cyclohexadien-1-ylidene)amino]- (9CI) (CA INDEX NAME)



RN 71198-55-5 HCAPLUS

CN Phenol, 4-[[4-imino-5-methyl-2-(methylamino)-2,5-cyclohexadien-1-ylidene]amino]- (9CI) (CA INDEX NAME)

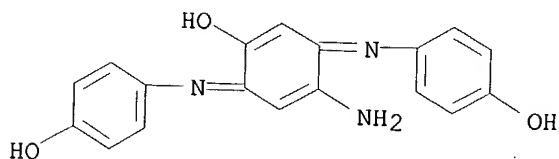


IT 71082-02-5P

RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, in **hair** dye prepns.)

RN 71082-02-5 HCAPLUS

CN Phenol, 4,4'-[(2-amino-5-hydroxy-2,5-cyclohexadiene-1,4-diylidene)dinitrilo]bis- (9CI) (CA INDEX NAME)

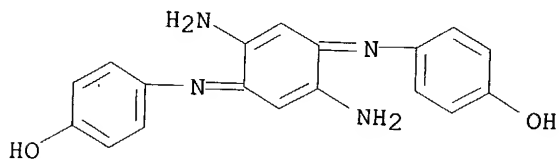


IT 72083-92-2P

RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, in oxidative **hair** dye formation)

RN 72083-92-2 HCAPLUS

CN Phenol, 4,4'-[(2,5-diamino-2,5-cyclohexadiene-1,4-diylidene)dinitrilo]bis- (9CI) (CA INDEX NAME)

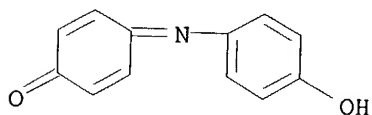


IT 500-85-6P 2582-41-4P 2701-88-4P  
24093-23-0P 24093-25-2P 30127-99-2P  
30128-00-8P 52200-93-8P 72083-78-4P  
72083-79-5P 72083-80-8P 72083-81-9P  
72083-82-0P 72083-83-1P 72083-84-2P  
72083-85-3P 72083-86-4P 72083-87-5P  
72083-88-6P 72083-89-7P 72083-90-0P  
72083-91-1P

RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, in oxidative **hair** dyeing)

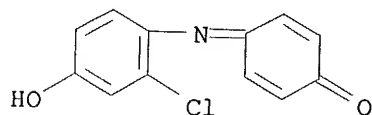
RN 500-85-6 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX NAME)



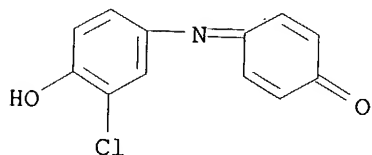
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CN 2,5-Cyclohexadien-1-one, 4-[(2-chloro-4-hydroxyphenyl)imino]- (9CI) (CA INDEX NAME)

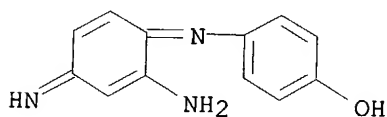




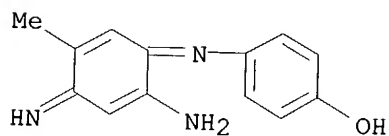
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CN 2,5-Cyclohexadien-1-one, 4-[(3-chloro-4-hydroxyphenyl)imino]- (9CI) (CA INDEX NAME)



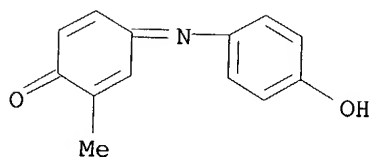
RN 24093-23-0 HCAPLUS  
CN Phenol, 4-[(2-amino-4-imino-2,5-cyclohexadien-1-ylidene)amino]- (9CI) (CA INDEX NAME)



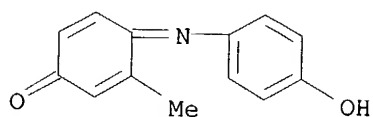
RN 24093-25-2 HCAPLUS  
CN Phenol, 4-[(2-amino-4-imino-5-methyl-2,5-cyclohexadien-1-ylidene)amino]- (9CI) (CA INDEX NAME)



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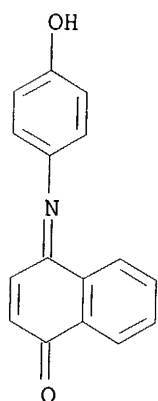


RN 30128-00-8 HCAPLUS  
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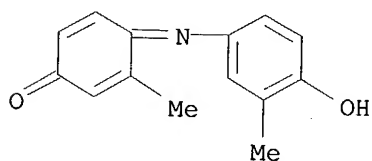
RN 52200-93-8 HCAPLUS

CN 1(4H)-Naphthalenone, 4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX NAME)



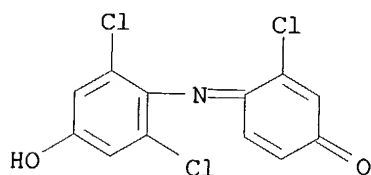
RN 72083-78-4 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 4-[(4-hydroxy-3-methylphenyl)imino]-3-methyl- (9CI) (CA INDEX NAME)



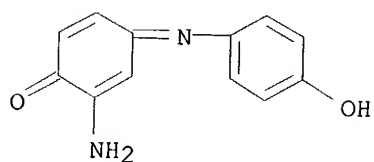
RN 72083-79-5 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 3-chloro-4-[(2,6-dichloro-4-hydroxyphenyl)imino]- (9CI) (CA INDEX NAME)

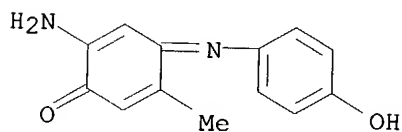


RN 72083-80-8 HCAPLUS

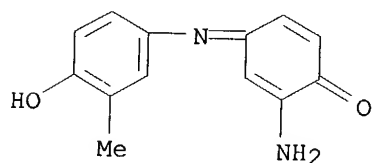
CN 2,5-Cyclohexadien-1-one, 2-amino-4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX NAME)



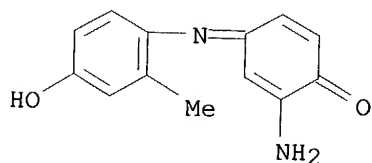
RN 72083-81-9 HCAPLUS  
CN 2,5-Cyclohexadien-1-one, 2-amino-4-[(4-hydroxyphenyl)imino]-5-methyl-  
(9CI) (CA INDEX NAME)



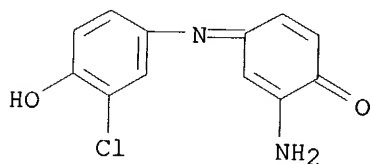
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CN 2,5-Cyclohexadien-1-one, 2-amino-4-[(4-hydroxy-3-methylphenyl)imino]-  
(9CI) (CA INDEX NAME)



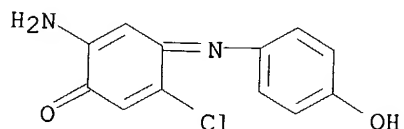
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CN 2,5-Cyclohexadien-1-one, 2-amino-4-[(4-hydroxy-2-methylphenyl)imino]-  
(9CI) (CA INDEX NAME)



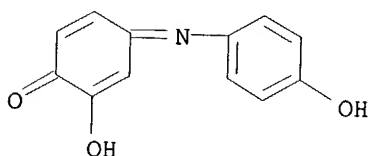
RN 72083-84-2 HCAPLUS  
CN 2,5-Cyclohexadien-1-one, 2-amino-4-[(3-chloro-4-hydroxyphenyl)imino]-  
(9CI) (CA INDEX NAME)



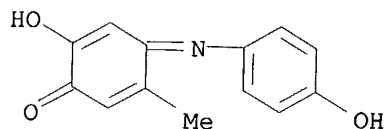
RN 72083-85-3 HCAPLUS  
CN 2,5-Cyclohexadien-1-one, 2-amino-5-chloro-4-[(4-hydroxyphenyl)imino]-  
(9CI) (CA INDEX NAME)



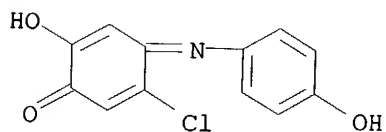
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CN 2,5-Cyclohexadien-1-one, 2-hydroxy-4-[(4-hydroxyphenyl)imino]- (9CI) (CA INDEX NAME)



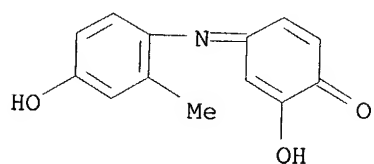
RN 72083-87-5 HCAPLUS  
CN 2,5-Cyclohexadien-1-one, 2-hydroxy-4-[(4-hydroxyphenyl)imino]-5-methyl-  
(9CI) (CA INDEX NAME)



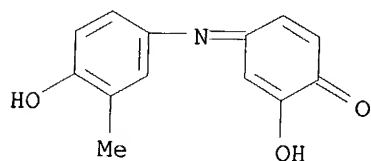
RN 72083-88-6 HCAPLUS  
CN 2,5-Cyclohexadien-1-one, 5-chloro-2-hydroxy-4-[(4-hydroxyphenyl)imino]-  
(9CI) (CA INDEX NAME)



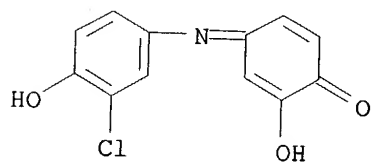
RN 72083-89-7 HCAPLUS  
CN 2,5-Cyclohexadien-1-one, 2-hydroxy-4-[(4-hydroxy-2-methylphenyl)imino]-  
(9CI) (CA INDEX NAME)



RN 72083-90-0 HCAPLUS  
CN 2,5-Cyclohexadien-1-one, 2-hydroxy-4-[(4-hydroxy-3-methylphenyl)imino]-  
(9CI) (CA INDEX NAME)

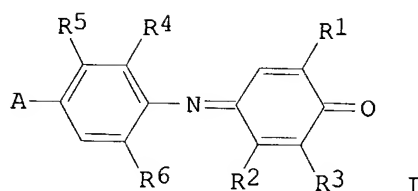


RN 72083-91-1 HCAPLUS  
CN 2,5-Cyclohexadien-1-one, 4-[(3-chloro-4-hydroxyphenyl)imino]-2-hydroxy-  
(9CI) (CA INDEX NAME)



L84 ANSWER 37 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1979:12166 HCAPLUS  
DN 90:12166  
TI Liquid hair dye compositions  
IN Grollier, Jean Francois; Fourcadier, Chantal  
PA Oreal S. A., Fr.  
SO Fr. Demande, 33 pp.  
CODEN: FRXXBL  
DT Patent  
LA French  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2359182	A1	19780217	FR 1976-22276	19760721
	FR 2359182	B1	19801024		
PRAI	FR 1976-22276		19760721		
GI					



AB Indoleaniline and indophenol **hair** dyes (I; R1-R6 = H, Cl, or numerous simple mol. substituents; A = OH or disubstituted N) are stable for long periods, when dissolved at 0.001-5% in solvents comprising alcs. and ethylene glycol monoalkyl ethers; the solns. are mixed with standard aqueous

cosmetic supports just prior to application. Thus, N-(4-hydroxy-2-chlorophenyl)-3-acetylamino-2,6-dimethylbenzoquinonimine [66612-10-0] 0.66, N-(4-hydroxy-2-chlorophenyl)-3-ureido-6-methylbenzoquinonimine [59996-96-2] 0.13, and N-[4-(ethylcarbamoylmethylamino)-2-methylphenyl]-3-acetylamino-6-methylbenzoquinonimine [55303-63-4] 0.018 g were dissolved in EtOH to 100 mL. After 8-mo storage in a sealed flask, 5 mL of this solution was mixed with 20 mL of a cosmetic support solution and applied as a rinse to light brown **hair**. After drying, the **hair** was easy to manage and had a lustrous mahogany tint.

IC C09B053-00

CC 62-3 (Essential Oils and Cosmetics)

ST indophenol indoleaniline hair dye; aniline deriv hair dye

IT Hair preparations

(dyes, benzoquinonephenylimines for)

IT 30810-03-8 **36635-96-8** 52136-25-1 52136-39-7 55303-61-2  
55303-63-4 56330-30-4 56330-67-7 **59996-96-2**  
**66612-10-0** **66612-11-1** 66612-12-2 66612-13-3

RL: BIOL (Biological study)

(**hair** dye composition containing)

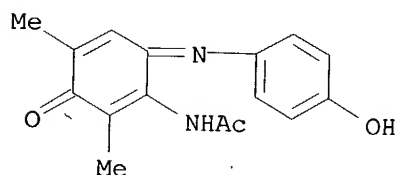
IT **36635-96-8** **59996-96-2** **66612-10-0**  
**66612-11-1**

RL: BIOL (Biological study)

(**hair** dye composition containing)

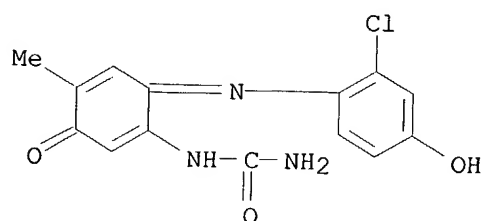
RN 36635-96-8 HCAPLUS

CN Acetamide, N-[6-[(4-hydroxyphenyl)imino]-2,4-dimethyl-3-oxo-1,4-cyclohexadien-1-yl]- (9CI) (CA INDEX NAME)

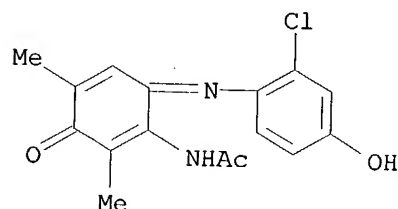


RN 59996-96-2 HCAPLUS

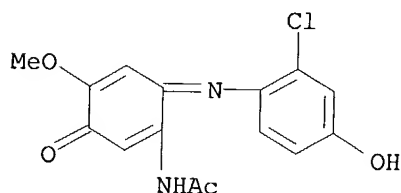
CN Urea, [6-[(2-chloro-4-hydroxyphenyl)imino]-4-methyl-3-oxo-1,4-cyclohexadien-1-yl]- (9CI) (CA INDEX NAME)



RN 66612-10-0 HCAPLUS  
CN Acetamide, N-[6-[(2-chloro-4-hydroxyphenyl)imino]-2,4-dimethyl-3-oxo-1,4-cyclohexadien-1-yl]- (9CI) (CA INDEX NAME)



RN 66612-11-1 HCAPLUS  
CN Acetamide, N-[6-[(2-chloro-4-hydroxyphenyl)imino]-4-methoxy-3-oxo-1,4-cyclohexadien-1-yl]- (9CI) (CA INDEX NAME)

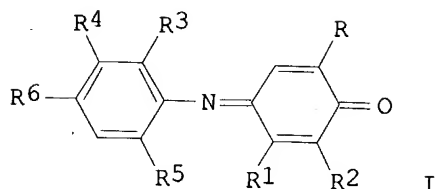


L84 ANSWER 38 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1978:430590 HCAPLUS  
DN 89:30590  
TI Dye solutions for coloring hair  
IN Grollier, Jean Francois  
PA Oreal S. A., Fr.  
SO Ger. Offen., 52 pp.  
CODEN: GWXXBX  
DT Patent  
LA German  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2732812	A1	19780126	DE 1977-2732812	19770720
	DE 2732812	B2	19810723		
	DE 2732812	C3	19820506		
	US 4184844	A	19800122	US 1977-816499	19770718
	BE 856986	A1	19780120	BE 1977-179494	19770720

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

NL 7708063	A	19780124	NL 1977-8063	19770720
NL 176789	B	19850102		
NL 176789	C	19850603		
JP 53012431	A2	19780203	JP 1977-87224	19770720
JP 62007165	B4	19870216		
AU 7727176	A1	19790125	AU 1977-27176	19770720
AU 520306	B2	19820128		
AT 7705237	A	19790715	AT 1977-5237	19770720
AT 355221	B	19800225		
GB 1565105	A	19800416	GB 1977-30554	19770720
CH 624008	A	19810715	CH 1977-9025	19770720
CA 1105386	A1	19810721	CA 1977-283133	19770720
PRAI LU 1976-75425		19760721		
GI				



AB Storage-stable **hair** dye compns. contain dyes I (R = Me, OMe; R1 = H, Me, NH2, NHAc, NHCONH2, NHCO2Et; R2, R5 = H, Me; R3, R4 = H, Me, Cl; R6 = H, NR7R8; R7 = H, Me, Et, CH2CH2OH; R8 = H, Me, Et, CH2CH2OH, CH2CONH2, CH2CH2NHSO2Me) in anhydrous EtOH, Me2CHOH, Me3COH, HOCH2CH2OMe, HOCH2CH2OEt, or HOCH2CH2OMe. Thus I (R = R2 = Me, R1 = NHAc, R3 = Cl, R4 = R5 = H, R6 = OH) [66612-10-0], 0.66, I (R = Me, R1 = NHCONH2, R2 = R4 = R5 = H, R3 = Cl, R6 = OH) [59996-96-2] 0.13, and I (R = R3 = Me, R1 = NHAc, R2 = R4 = R5 = H, R6 = NEtCH2CONH2) [55303-63-4] 0.018 g was dissolved in EtOH to 100 mL to give a stable solution

IC A61K007-13

CC 62-3 (Essential Oils and Cosmetics)

ST hair dye benzoquinone imine

IT Hair preparations

(dyes, storage-stable, benzoquinone imines for)

IT 30168-81-1 30749-78-1 30749-80-5

30749-84-9 30810-03-8 33500-35-5 36635-96-8

52136-23-9 52136-25-1 52136-39-7 55302-67-5 55303-28-1

55303-40-7 55303-61-2 55303-63-4 55303-67-8 55366-68-2

56330-30-4 56330-67-7 56330-88-2 59996-96-2

66612-10-0 66612-11-1 66612-12-2 66612-13-3

66612-14-4 66612-15-5 66612-16-6 66612-17-7 66612-18-8

66612-19-9 66612-20-2 66612-21-3 66612-22-4

RL: BIOL (Biological study)

(storage-stable **hair** dye solution containing)

IT 30168-81-1 30749-78-1 30749-80-5

30749-84-9 36635-96-8 59996-96-2

66612-10-0 66612-11-1 66612-14-4

66612-22-4

RL: BIOL (Biological study)

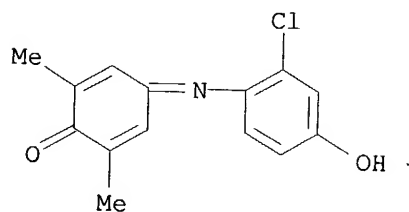
(storage-stable **hair** dye solution containing)

RN 30168-81-1 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 4-[(2-chloro-4-hydroxyphenyl)imino]-2,6-dimethyl-

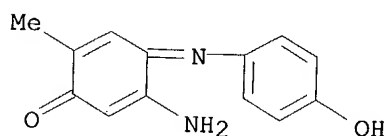
(9CI) (CA INDEX NAME)





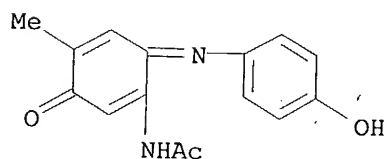
RN 30749-78-1 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 5-amino-4-[(4-hydroxyphenyl)imino]-2-methyl- (9CI) (CA INDEX NAME)



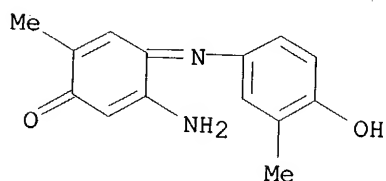
RN 30749-80-5 HCAPLUS

CN Acetamide, N-[6-[(4-hydroxyphenyl)imino]-4-methyl-3-oxo-1,4-cyclohexadien-1-yl]- (9CI) (CA INDEX NAME)



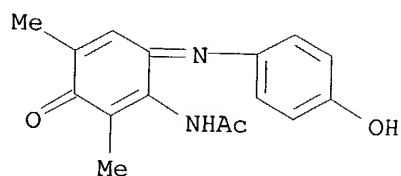
RN 30749-84-9 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 5-amino-4-[(4-hydroxy-3-methylphenyl)imino]-2-methyl- (9CI) (CA INDEX NAME)



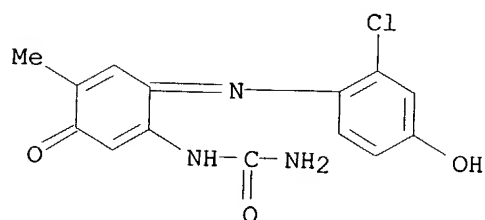
RN 36635-96-8 HCAPLUS

CN Acetamide, N-[6-[(4-hydroxyphenyl)imino]-2,4-dimethyl-3-oxo-1,4-cyclohexadien-1-yl]- (9CI) (CA INDEX NAME)



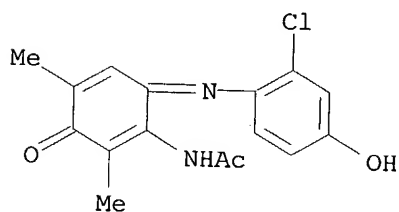
RN 59996-96-2 HCAPLUS

CN Urea, [6-[(2-chloro-4-hydroxyphenyl)imino]-4-methyl-3-oxo-1,4-cyclohexadien-1-yl]- (9CI) (CA INDEX NAME)



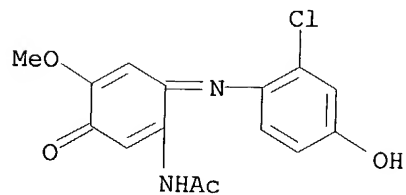
RN 66612-10-0 HCAPLUS

CN Acetamide, N-[6-[(2-chloro-4-hydroxyphenyl)imino]-2,4-dimethyl-3-oxo-1,4-cyclohexadien-1-yl]- (9CI) (CA INDEX NAME)



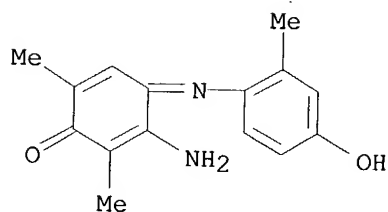
RN 66612-11-1 HCAPLUS

CN Acetamide, N-[6-[(2-chloro-4-hydroxyphenyl)imino]-4-methoxy-3-oxo-1,4-cyclohexadien-1-yl]- (9CI) (CA INDEX NAME)

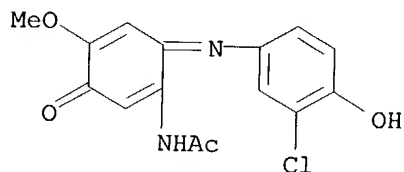


RN 66612-14-4 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 3-amino-4-[(4-hydroxy-2-methylphenyl)imino]-2,6-dimethyl- (9CI) (CA INDEX NAME)



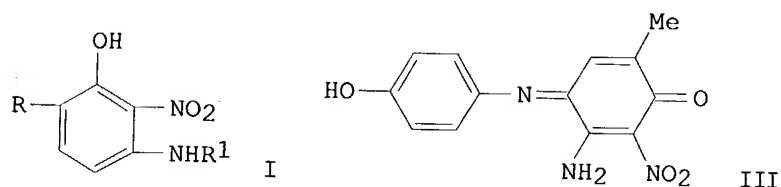
RN 66612-22-4 HCAPLUS  
 CN Acetamide, N-[6-[(3-chloro-4-hydroxyphenyl)imino]-4-methoxy-3-oxo-1,4-cyclohexadien-1-yl]- (9CI) (CA INDEX NAME)



L84 ANSWER 39 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1977:486346 HCAPLUS  
 DN 87:86346  
 TI Nitro couplers used in direct, oxidation, and mixed dyes for keratin fiber  
 IN Ormancey, Andree; Procajlo, Ginette  
 PA Oreal S. A., Fr.  
 SO Fr. Demande, 63 pp.  
 CODEN: FRXXBL  
 DT Patent  
 LA French  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2315256	A1	19770121	FR 1975-20155	19750626
	FR 2315256	B1	19790323		
	BE 843417	A1	19761227	BE 1976-168319	19760625
	NL 7606948	A	19761228	NL 1976-6948	19760625
	NL 182534	B	19871102		
	NL 182534	C	19880405		
	JP 52003836	A2	19770112	JP 1976-75408	19760625
	JP 62034752	B4	19870728		
	DE 2628716	A1	19770120	DE 1976-2628716	19760625
	DE 2628716	C2	19880616		
	AT 7604675	A	19781215	AT 1976-4675	19760625
	AT 351171	B	19790710		
	AU 498883	B2	19790329	AU 1976-15303	19760625
	GB 1544127	A	19790411	GB 1976-26586	19760625
	CH 618343	A	19800731	CH 1976-8202	19760625
	CA 1088066	A1	19801021	CA 1976-255711	19760625
	DE 2661057	C2	19880804	DE 1976-2661057	19760625
	AT 7706872	A	19790515	AT 1977-6872	19770926
	AT 353975	B	19791210		
	CH 621537	A	19810213	CH 1979-10840	19791206
	CA 1089857	A2	19801118	CA 1979-341780	19791213

	US 4330291	A	19820518	US 1980-127461	19800305
	US 4473374	A	19840925	US 1982-351300	19820222
PRAI	FR 1975-20155		19750626		
	FR 1975-34208		19751107		
	US 1976-698126		19760621		
	AT 1976-4675		19760625		
	CA 1976-255711		19760625		
	CH 1976-8202		19760625		
	US 1980-127461		19800305		
GI					



- AB 3-Amino-2-nitrophenols (I, R = Me, Cl; R1 = H, CH2CH2OH, Me, COMe, CO2Et, 2-piperidinoethyl) were prepared, treated with aniline derivs. to form benzoquinoneimine derivs., and were used as direct **hair** dyes and as couplers in oxidative **hair** dyeing compns. Thus, 4,3-Me(HO)C6H3NHAc [5307-07-3] was successively nitrated and hydrolyzed to give I (R = Me, R1 = H) (II) [62106-30-3]. Reaction of II with 4-H2NC6H4OH [123-30-8] in the presence of persulfate gave III [62106-39-2]. The use of II in direct and as a coupler in oxidative dyeing of **hair** is illustrated.
- IC A61K007-13
- CC 40-9 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)  
Section cross-reference(s): 62
- ST aminonitrophenol hair dye; nitrophenol hair dye; coupler aminonitrophenol hair dye; indophenol hair dye
- IT Hair  
(dyes for, aminonitrophenol derivs. as)
- IT 62106-29-0 62106-33-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrolysis of)
- IT 5307-07-3 28443-52-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(nitration of)
- IT 62106-35-8P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and partial hydrolysis of)
- IT 62106-37-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reaction with hydrobromic acid)
- IT 62106-38-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reaction with piperidine)
- IT 62106-31-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and reaction with potassium hydroxide)

IT 62106-30-3P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation and use in hair dyeing compns.)

IT 62106-32-5P 62106-36-9P 62106-39-2P 62106-40-5P 62106-41-6P  
62106-42-7P 62106-43-8P 62106-44-9P 62106-45-0P 62106-46-1P  
62106-47-2P 62106-48-3P 62106-49-4P 62106-50-7P 63719-68-6P  
63719-69-7P 63719-72-2P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of)

IT 110-89-4, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with [(bromoethyl)amino]nitrophenol derivative)

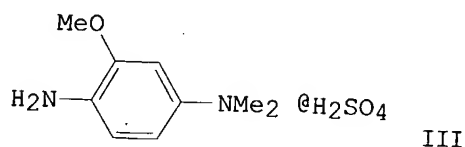
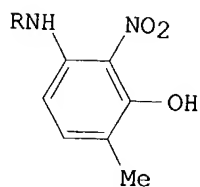
IT 123-30-8 2628-69-5 52131-94-9 52671-64-4 56331-44-3 56496-88-9  
57240-10-5 62106-52-9 63719-70-0 63719-71-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with aminonitrophenol derivative)

IT 627-11-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with aminophenol derivative)

L84 ANSWER 40 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1977:127101 HCAPLUS  
DN 86:127101  
TI Nitrated coupler for use in direct, oxidation and mixed hair colorings  
IN Bugaut, Andree; Jeanminet, Ginette  
PA Oreal S. A., Fr.  
SO Ger. Offen., 97 pp.  
CODEN: GWXXBX }

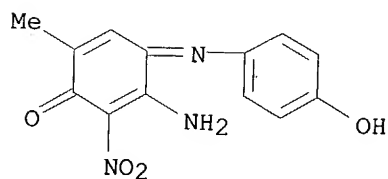
DT Patent  
LA German  
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2628716	A1	19770120	DE 1976-2628716	19760625
	DE 2628716	C2	19880616		
	FR 2315256	A1	19770121	FR 1975-20155	19750626
	FR 2315256	B1	19790323		
	FR 2330673	A1	19770603	FR 1975-34208	19751107
	FR 2330673	B1	19790504		
PRAI	FR 1975-20155		19750626		
GI	FR 1975-34208		19751107		

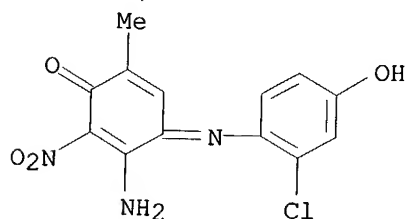


- AB Compns. for coloring hair by either oxidation or direct dyeing or a combination of the 2 processes have pH 5-11, and comprise 0.002-2% of at least one 2-nitro-3-aminophenol derivative coupler, 0-2% of at least one aniline derivative oxidation base, ≤20% surfactant, and an aqueous or aqueous-alc. carrier containing ≤40% glycol or alkanol. For example, 100 g 2-methyl-5-acetylaminophenol [5307-07-3] was nitrated and the 94 g 2-methyl-6-nitro-5-acetylaminophenol [62106-29-0] formed was deacetylated to give 45 g 2-methyl-5-amino-6-nitrophenol (I) [62106-30-3]. I (16.8 g) was dissolved in 30 cm<sup>3</sup> dioxane and heated with Et chloroformate [541-41-3] in the presence of CaCO<sub>3</sub> to give 2-methyl-5-carbethoxyamino-6-nitrophenol (II) [62106-36-9]. A mixture of 2 g II, 20 g polymerized lauryl alc., containing 10.5 mol. ethylene oxide, enough H<sub>2</sub>O to give 100 g, and enough NH<sub>3</sub> to give pH 9 dyed bleached hair a rosey apricot color. A 2nd dye composition contained 2.5 g I, 0.3 g 6-hydroxyphenylmorpholine, 0.3 g 3-methoxy-4-amino-N,N-dimethylaniline sulfate (III) [55303-08-7] and 1.5 g 2,6-dimethyl-4-aminophenol-HCl [10486-48-3] oxidation bases, 30 g propylene glycol, 7 g polymerized nonylphenol containing 4 mol. ethylene oxide, 7 g polymerized nonylphenol containing 9 mol. ethylene oxide, and H<sub>2</sub>O to give 100 g. The composition was adjusted to pH 10 by addition of NH<sub>3</sub>, and H<sub>2</sub>O<sub>2</sub> was added just before use. The composition dyed naturally white hair an ash biege color. Water-waving dye loations were also prepared
- IC C07C087-60
- CC 62-3 (Essential Oils and Cosmetics)  
Section cross-reference(s): 25, 40
- ST hair dye aminophenol deriv
- IT Hair preparations  
(dyes, nitroaminophenol derivs. and aniline derivs. in)
- IT 2442-80-0 26878-35-3 41316-84-1 42965-55-9 57838-73-0  
RL: BIOL (Biological study)  
(for hair dyes)
- IT 92-09-1 536-46-9 591-27-5 615-45-2 615-66-7 2172-32-9  
3096-71-7 5395-70-0 10323-68-9 10486-48-3 14090-03-0 15980-22-0  
46409-67-0 54381-16-7 55302-94-8 55303-07-6 55303-08-7  
56331-21-6 56331-23-8 56331-26-1 56331-30-7 56331-34-1  
56331-39-6 56331-42-1 56331-43-2 56357-59-6 56496-88-9  
62106-53-0  
RL: BIOL (Biological study)  
(in hair dyes)
- IT 5307-07-3 28443-52-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(nitration of)
- IT 62106-29-0P 62106-33-6P  
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and deacetylation of)
- IT 62106-31-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and decarboxylation of)
- IT 62106-38-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reaction with piperidine)
- IT 62106-30-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reactions of, in hair dye processes)
- IT 62106-37-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and ring opening of)  
 IT 62106-32-5P 62106-34-7P 62106-35-8P 62106-36-9P  
 RL: PREP (Preparation)  
 (preparation of, as hair dye coupler)  
 IT **62106-39-2P 62106-40-5P** 62106-41-6P 62106-42-7P  
 62106-43-8P 62106-44-9P 62106-45-0P 62106-46-1P 62106-47-2P  
 62106-48-3P 62106-49-4P 62106-50-7P  
 RL: PREP (Preparation)  
 (preparation of, for hair dyes)  
 IT 62106-52-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with chloroaminonitrophenol)  
 IT 123-30-8 541-41-3 627-11-2 2628-69-5 52131-94-9 52671-64-4  
 56331-28-3 56331-44-3 56496-88-9 57240-10-5 62106-51-8  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with methylaminonitrophenol)  
 IT 110-89-4, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with methylbromoethylaminonitrophenol)  
 IT **62106-39-2P 62106-40-5P**  
 RL: PREP (Preparation)  
 (preparation of, for hair dyes)  
 RN 62106-39-2 HCAPLUS  
 CN 2,5-Cyclohexadien-1-one, 3-amino-4-[(4-hydroxyphenyl)imino]-6-methyl-2-nitro- (9CI) (CA INDEX NAME)



RN 62106-40-5 HCAPLUS  
 CN 2,5-Cyclohexadien-1-one, 3-amino-4-[(2-chloro-4-hydroxyphenyl)imino]-6-methyl-2-nitro- (9CI) (CA INDEX NAME)



L84 ANSWER 41 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1974:429470 HCAPLUS  
 DN 81:29470  
 TI Dye lyophilizate for coloring human hair  
 IN Ghilardi, Giuliana; Bore, Pierre; Grollier, Jean F.  
 PA Oreal S. A.

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

SO Ger. Offen., 53 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2332156	A1	19740117	DE 1973-2332156	19730625
	FR 2190407	A1	19740201	FR 1973-23160	19730625
	GB 1402051	A	19750806	GB 1973-29982	19730625
	US 3981676	A	19760921	US 1973-372933	19730625
	CH 587054	A	19770429	CH 1973-9227	19730625
	CA 1009577	A1	19770503	CA 1973-174905	19730626
PRAI	LU 1972-65589		19720626		
	LU 1970-60449		19700303		
	LU 1970-61890		19701019		
	LU 1971-62596		19710215		
	US 1971-120353		19710302		
AB	Freeze-dried indamine, indoaniline, indophenol, and diaminobenzoquinone dyes for human hair are obtained from a solution of 1 or more organic solvents or their aqueous mixts. by freezing, subliming the product by heating in a vacuum at a temperature below the m.p. of the product, and desorbing the sublimate to expel residual combined liquid. The solns. contained fillers such as oligopeptides, polymerizates, mixed polymerizates, and protein hydrolysates. The resulting powder is put into solution immediately before used. Thus, a solution of 1 g N-(4-hydroxy-6-chloropenyl)-2,6-dimethylbenzoquinoneimine and 2 g poly(vinylpyrrolidinone) in tert-butyl alc., making 100 cm <sup>3</sup> , is cooled to -60°, lyophilized 12 hr starting at -40°, and desorbed 8 hr at 35°. The resulting powder (0.1 g) dissolves completely in EtOH in 15 sec whereas the same dye, obtained directly from its reaction mixture and sieved, is only 84% soluble				
IC	A61K				
CC	62-3 (Essential Oils and Cosmetics)				
ST	hair dye lyophilization soly; indamine hair dye lyophilization; indoaniline hair dye lyophilization; indophenol hair dye lyophilization; benzoquinone hair dye lyophilization				
IT	Hair				
	(dyes for, freeze drying for solubility and stability)				
IT	Dyes				
	(freeze drying of hair, for solubility and stability)				
IT	Freeze drying				
	(of hair dyes, for solubility and stability)				
IT	2,5-Cyclohexadiene-1,4-dione, 2,5-diamino-, derivs.				
	RL: PROC (Process)				
	(freeze drying of, for soluble and stable hair dyes)				
IT	2,5-Cyclohexadien-1-one, 4-[(4-aminophenyl)imino]-, derivs.				
	2,5-Cyclohexadien-1-one, 4-[(4-hydroxyphenyl)imino]-, derivs.				
	RL: PROC (Process)				
	(freeze drying of, for soluble and stable hair dyes)				
IT	Acetamide, N-[2-[[4-[(2-amino-4-imino-5-methoxy-2,5-cyclohexadien-1-ylidene)amino]phenyl]ethylamino]ethyl]-, zinc complexes				
	Zinc, with N-[(4'-ethylacetlylaminoethylamino)phenyl]-3-amino-6-methoxy-benzoquinonediiimine				
	RL: PROC (Process)				
	(freeze drying of, for soluble hair dyes)				
IT	1,4-Benzenediamine, N-(4-imino-2,5-cyclohexadien-1-ylidene)-, derivs.				
	RL: PROC (Process)				
	(freeze drying of, for soluble stable hair dyes)				
IT	30168-81-1 30749-78-1 30749-80-5 30749-86-1				



30809-96-2 30809-98-4 30810-00-5 30810-03-8 31634-45-4  
 31634-46-5 33500-50-4 35940-79-5 **36635-96-8** 52136-21-7  
 52136-25-1 52636-10-9 52636-12-1 52636-13-2 52636-15-4  
 52636-17-6

RL: PROC (Process)

(freeze drying of, for soluble **hair** dyes)

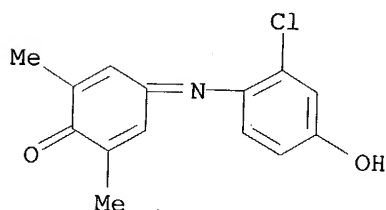
IT **30168-81-1 30749-78-1 30749-80-5**  
**36635-96-8**

RL: PROC (Process)

(freeze drying of, for soluble **hair** dyes)

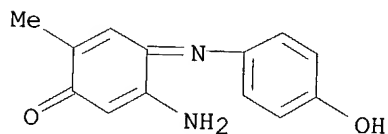
RN 30168-81-1 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 4-[(2-chloro-4-hydroxyphenyl)imino]-2,6-dimethyl-  
 (9CI) (CA INDEX NAME)



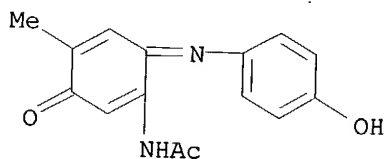
RN 30749-78-1 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 5-amino-4-[(4-hydroxyphenyl)imino]-2-methyl-  
 (9CI) (CA INDEX NAME)



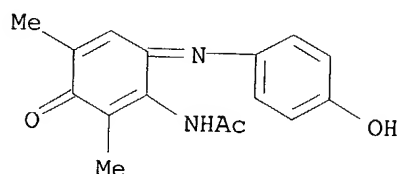
RN 30749-80-5 HCAPLUS

CN Acetamide, N-[6-[(4-hydroxyphenyl)imino]-4-methyl-3-oxo-1,4-cyclohexadien-  
 1-yl]- (9CI) (CA INDEX NAME)



RN 36635-96-8 HCAPLUS

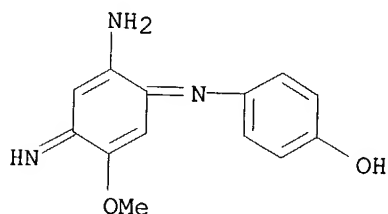
CN Acetamide, N-[6-[(4-hydroxyphenyl)imino]-2,4-dimethyl-3-oxo-1,4-  
 cyclohexadien-1-yl]- (9CI) (CA INDEX NAME)



L84 ANSWER 42 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1974:124583 HCAPLUS  
 DN 80:124583  
 TI Dye lyophilizates for hair dyeing  
 IN Ghilardi, Giuliana; Bore, Pierre; Grollier, Jean F.  
 PA Oreal  
 SO Ger. Offen., 21 pp. Addn. to Ger. Offen. 2,109,850 (CA 75;154920k).  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2332157	A1	19740117	DE 1973-2332157	19730625
	NL 7308790	A	19731228	NL 1973-8790	19730625
	FR 2197950	A2	19740329	FR 1973-23161	19730625
	JP 49052825	A2	19740522	JP 1973-71604	19730625
	GB 1388240	A	19750326	GB 1973-29981	19730625
	CH 572964	A	19760227	CH 1973-9228	19730625
	US 3981678	A	19760921	US 1973-372934	19730625
	CA 998208	A1	19761012	CA 1973-174989	19730626
PRAI	LU 1972-65590		19720626		
	LU 1970-60449		19700303		
	LU 1970-61890		19701019		
	LU 1971-62596		19710215		
	US 1971-120353		19710302		
GI	For diagram(s), see printed CA Issue.				
AB	Reaction mixts. for dye lyophilizates of high sp. surface and useful for hair dyeing contained couplers and bases for oxidative dye formation and organic solvents. e.g., dioxane (I), to maintain a homogeneous-phase oxidation. Thus, a solution of 10 ml 20% NH4OH, p-(H2N)2C6H4 0.108, 2,6-xyleneol 0.122, poly(vinylpyrrolidinone) 5, I 40, 30% H2O2 26.6, and H2O balance to 100 g was kept 30 min in the air, 0.1N KMnO4 added for H2O2 removal, the mixture filtered, cooled 1 hr at -60°, and lyophilized to give a II lyophilizate.				
IC	C09B; A61K				
CC	62-3 (Essential Oils and Cosmetics)				
ST	Section cross-reference(s): 40				
IT	dye lyophilizate hair; oxidn dye lyophilizate hair; dioxane oxidn dye lyophilizate				
IT	Dyes				
IT	(benzoquinonimine derivative lyophilizates, for hair)				
IT	(dyes for, benzoquinonimine derivative lyophilizates)				
IT	29807-67-8 30749-86-1 52432-85-6				
	RL: BIOL (Biological study)				
	(hair dye lyophilizate)				
IT	614-94-8				
	RL: RCT (Reactant); RACT (Reactant or reagent)				

(reaction of, with aminophenol)  
 IT 576-26-1  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with diamines)  
 IT 123-30-8  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with diaminoanisole dihydrochloride)  
 IT 14090-03-0  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with xylenol)  
 IT 106-50-3, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (with xylenol)  
 IT 52432-85-6  
 RL: BIOL (Biological study)  
 (hair dye lyophilizate)  
 RN 52432-85-6 HCAPLUS  
 CN Phenol, 4-[(2-amino-4-imino-5-methoxy-2,5-cyclohexadien-1-ylidene)amino]-  
 (9CI) (CA INDEX NAME)



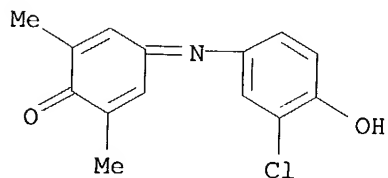
L84 ANSWER 43 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1973:149221 HCAPLUS  
 DN 78:149221  
 TI Halogenated indophenol dye for human hair  
 IN Kalopissis, Gregoire; Bugaut, Andree; Estradier, Francoise  
 PA Oreal S. A.  
 SO Ger. Offen., 39 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2237270	A1	19730208	DE 1972-2237270	19720728
	US 3894837	A	19750715	US 1972-275463	19720727
	NL 7210417	A	19730201	NL 1972-10417	19720728
	FR 2148103	A1	19730316	FR 1972-27454	19720728
	GB 1354645	A	19740530	GB 1972-35479	19720728
	CH 554675	A	19741015	CH 1972-11269	19720728
	CA 986529	A1	19760330	CA 1972-148246	19720728
	AT 7206507	A	19760515	AT 1972-6507	19720728
	AT 334541	B	19760125		
	SE 403126	C	19781109	SE 1972-9917	19720728
	ES 405368	A1	19750701	ES 1972-405368	19720729
	AU 7245136	A1	19740207	AU 1972-45136	19720731
PRAI	LU 1971-63641		19710730		
	LU 1969-58954		19690625		

US 1970-49905 19700625  
 US 1970-100433 19701221

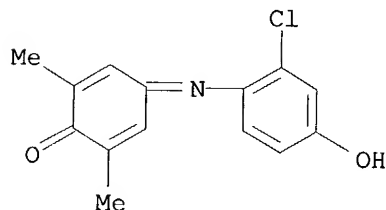
AB Halogenated indophenol dyes (I, R = H, Cl, Br, R1 = Me, Cl, tert-butyl, R2 = H, Me, n = 0, 1, 2) were prepared and were used to dye **hair** from H2O, H2O-alc., and waving solns. containing cosmetic resins. Thus, 2,6-Me2C6H3OH in NH4OH-Me2CO solution was condensed with 3,4-Cl(H2N)C6H3OH to give indophenol dye I (R = 2-chloro,, R1, R2 = 3,5-di-Me) [ **30168-81-1**] and when incorporated into a H2O-alc. mixture adjusted to pH 8 with NH4OH, it was used to dye **hair** beige with a reddish luster. The other I were similarly prepared

IC C09B  
 CC 62-3 (Essential Oils and Cosmetics)  
 ST halogenated indophenol dye; hair dye  
 IT Hair  
 (dyes for, haloindophenols as)  
 IT Dyes  
 (haloindophenols, for hair)  
 IT **30168-80-0 30168-81-1 30749-86-1 31634-45-4**  
**41349-88-6 41349-89-7 41349-90-0**  
**41349-91-1 41349-93-3 41349-94-4**  
**41349-95-5 41349-96-6 41349-97-7**  
**41349-98-8 41350-01-0 41350-02-1**  
**41350-03-2**  
 RL: USES (Uses)  
 (dyes, for **hair**)  
 IT 95-57-8 108-39-4 108-43-0 128-39-2  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with (chloroimino)(chloro)cyclohexadienone)  
 IT 95-87-4 526-75-0 576-26-1  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with aminohalophenols)  
 IT 51-78-5 41350-07-6  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with chlorophenol)  
 IT 609-21-2  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with dimethylphenol)  
 IT 7248-09-1 17609-80-2 41350-06-5  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with phenols)  
 IT **30168-80-0 30168-81-1 41349-88-6**  
**41349-89-7 41349-90-0 41349-91-1**  
**41349-93-3 41349-94-4 41349-95-5**  
**41349-96-6 41349-97-7 41349-98-8**  
**41350-01-0 41350-02-1 41350-03-2**  
 RL: USES (Uses)  
 (dyes, for **hair**)  
 RN 30168-80-0 HCAPLUS  
 CN 2,5-Cyclohexadien-1-one, 4-[(3-chloro-4-hydroxyphenyl)imino]-2,6-dimethyl-  
 (9CI) (CA INDEX NAME)



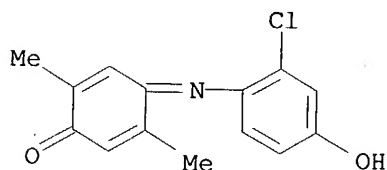
RN 30168-81-1 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 4-[(2-chloro-4-hydroxyphenyl)imino]-2,6-dimethyl-  
(9CI) (CA INDEX NAME)



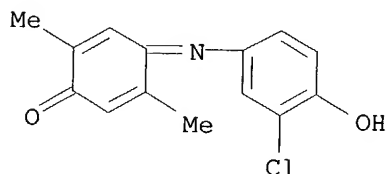
RN 41349-88-6 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 4-[(2-chloro-4-hydroxyphenyl)imino]-2,5-dimethyl-  
(9CI) (CA INDEX NAME)



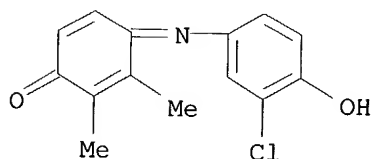
RN 41349-89-7 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 4-[(3-chloro-4-hydroxyphenyl)imino]-2,5-dimethyl-  
(9CI) (CA INDEX NAME)



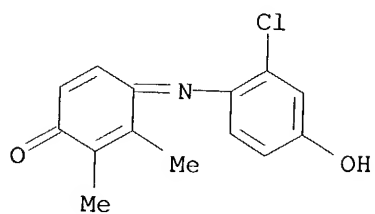
RN 41349-90-0 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 4-[(3-chloro-4-hydroxyphenyl)imino]-2,3-dimethyl-  
(9CI) (CA INDEX NAME)

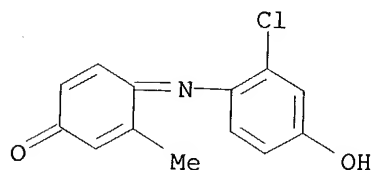


RN 41349-91-1 HCAPLUS

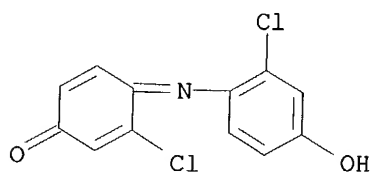
CN 2,5-Cyclohexadien-1-one, 4-[(2-chloro-4-hydroxyphenyl)imino]-2,3-dimethyl-  
(9CI) (CA INDEX NAME)



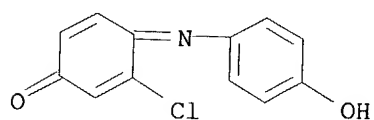
RN 41349-93-3 HCAPLUS  
CN 2,5-Cyclohexadien-1-one, 4-[(2-chloro-4-hydroxyphenyl)imino]-3-methyl-  
(9CI) (CA INDEX NAME)



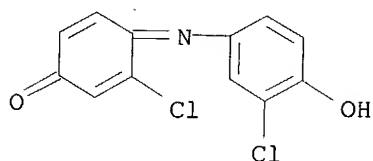
RN 41349-94-4 HCAPLUS  
CN 2,5-Cyclohexadien-1-one, 3-chloro-4-[(2-chloro-4-hydroxyphenyl)imino]-  
(9CI) (CA INDEX NAME)



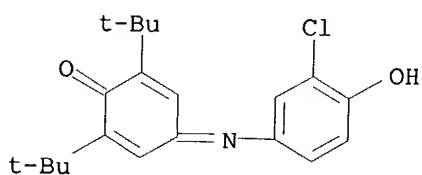
RN 41349-95-5 HCAPLUS  
CN 2,5-Cyclohexadien-1-one, 3-chloro-4-[(4-hydroxyphenyl)imino]- (9CI) (CA  
INDEX NAME)



RN 41349-96-6 HCAPLUS  
CN 2,5-Cyclohexadien-1-one, 3-chloro-4-[(3-chloro-4-hydroxyphenyl)imino]-  
(9CI) (CA INDEX NAME)

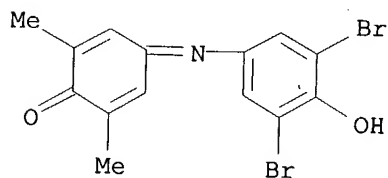


RN 41349-97-7 HCAPLUS  
 CN 2,5-Cyclohexadien-1-one, 4-[(3-chloro-4-hydroxyphenyl)imino]-2,6-bis(1,1-dimethylethyl)-, potassium salt (9CI) (CA INDEX NAME)

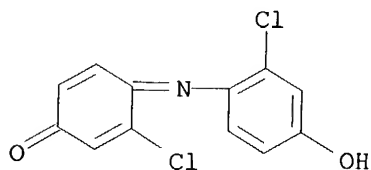


● K

RN 41349-98-8 HCAPLUS  
 CN 2,5-Cyclohexadien-1-one, 4-[(3,5-dibromo-4-hydroxyphenyl)imino]-2,6-dimethyl- (9CI) (CA INDEX NAME)

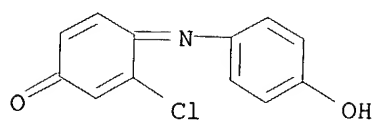


RN 41350-01-0 HCAPLUS  
 CN 2,5-Cyclohexadien-1-one, 3-chloro-4-[(2-chloro-4-hydroxyphenyl)imino]-, sodium salt (9CI) (CA INDEX NAME)



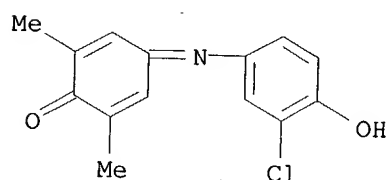
● Na

RN 41350-02-1 HCAPLUS  
 CN 2,5-Cyclohexadien-1-one, 3-chloro-4-[(4-hydroxyphenyl)imino]-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 41350-03-2 HCAPLUS  
 CN 2,5-Cyclohexadien-1-one, 4-[(3-chloro-4-hydroxyphenyl)imino]-2,6-dimethyl-, ammonium salt (9CI) (CA INDEX NAME)



● NH<sub>3</sub>

L84 ANSWER 44 OF 44 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1972:541487 HCAPLUS  
 DN 77:141487  
 TI Indophenols as hair dyes  
 IN Kalopissis, Gregoire; Bugaut, Andree; Estradier, Francoise  
 PA Oreal S. A.  
 SO Ger. Offen., 26 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2163636	A	19720706	DE 1971-2163636	19711221
	IT 1027008	A	19781120	IT 1971-69522	19710727
	NL 7112460	A	19720623	NL 1971-12460	19710910
	NL 176634	B	19841217		
	NL 176634	C	19850517		
	BE 776985	A4	19720620	BE 1971-111927	19711220
	US 3894837	A	19750715	US 1972-275463	19720727
	US 3884625	A	19750520	US 1973-336531	19730228
PRAI	US 1970-100433		19701221		
	LU 1969-58954		19690625		
	BE 1970-752381		19700623		
	US 1970-49905		19700625		
	LU 1971-63641		19710730		
AB	Seven indophenols (I; R = H or Ac; R <sub>1</sub> , R <sub>2</sub> , R <sub>3</sub> = H or Me; R <sub>4</sub> = H or Cl), dyes for human hair, were prepared by condensing p-aminophenols or				



N-chloro-p-benzoquinone imines with phenols. For example, aqueous (NH<sub>4</sub>)<sub>2</sub>S<sub>2</sub>O<sub>8</sub> was added to p-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>OH and 2,6,3-Me<sub>2</sub>(AcNH)C<sub>6</sub>H<sub>2</sub>OH in aqueous Me<sub>2</sub>CO containing NH<sub>4</sub>OH with cooling and the mixture kept 20 min at room temperature to give a dye

(I; R = Ac, R<sub>1</sub> = R<sub>2</sub> = Me, R<sub>3</sub> = R<sub>4</sub> = H) (II) [36635-96-8]. An aqueous-alc. solution containing II and NH<sub>4</sub>OH to pH 10 dyed bleached hair a pale golden blond shade.

IC A61K

CC 40-9 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)  
Section cross-reference(s): 62

ST indophenol hair dye; benzoquinone imine dye

IT Hair

(dyes for, indophenol derivs. as)

IT Dyes

(indophenol derivs., for hair)

IT 36635-96-8P 38842-57-8P 38842-58-9P 38842-59-0P 38842-60-3P  
38842-61-4P 38842-62-5P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of)

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